L 5388-66 EWT(1)/EWP(m)/ETC/EWG(m)/EWA(d)/EPA(w)-2/FCS(k)/EWA(h)/EWA(c) IJP(c)
ACC NR: AP5027280 WW/AT SOURCE CODE: UR/0207/65/000/005/0118/0120

AUTHORS: Iakol'dskiy, A. M. (Novosibirsk); Kurtmullayev, R. Kh. (Novosibirsk); Nesterikhin, Yu. Ye. (Novosibirsk); Pil'skiy, V. I. (Novosibirsk); Ponomarenko, A. G. (Novosibirsk)

ORG: none

TITLE: Magnetic field trapping and plasma containment in experiments with a collisionless shock wave

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 5, 1965, 118-120

TOPIC TAGS: magnetic field, plasma, shock wave, rarefied plasma, neutron generation, deuterium

ABSTRACT: Magnetic trapping and plasma containment were achieved in a rarefied, cylindrical, deuterium plasma by creating a collisionless shock condition. A 16-cm glass tube was placed in the centerline of a quasi-stationary magnetic field ($H_0 \sim 0.5$ kilo-oersted, $T = 5$ μsec). In the center of this system was added a 30-cm shock coil generating a magnetic field $H \sim 3$ to 6 kilo-oersteds, for $T \sim 1.4$

Card 1/2

6

to 2 μsec. The initial plasma concentration was 5×10^{12} to 3×10^{13} cm^{-3}. Magnetic field trapping and plasma containment were achieved on the basis of the following observation. An average 40 μsec delay in neutron generation (10^6 to 10^7 neutrons), 10 kev ion-energy attainment, and bremsstrahlung radiation were obtained after the applied field H_o had decayed. Qualitative measurements from magnetic probes indicated that the trapped field was of the order of H (coil field) with a duration commensurate with neutron generation. The trapped plasma energy was about 10 kev. The authors thank G. I. Budker for his constant influence and interest in the work and R. Z. Sagdeyev for his help and participation in evaluating the results. Orig. art. has: 2 figures and 1 formula.

SUB CODE: ME/ SUBM DATE: 17Nov64/ ORIG REF: 002/ OTH REF: 001

L 14982-66 EWT(1)/ EWP(m)/EWT(m)/ETC(F)/EPF(n)-2/EWG(m)/EWA(d)/EWP(t)/FCS(k)/
ACC NR: AP6002366 EWP(b)/EWA(h) SOURCE CODE: UR/0207/65/000/006/0119/0121
IJP(c) JD/WW/AT

AUTHOR: Iskol'dskiy, A.M. (Novosibirsk); Kurimullayev, R. Kh. (Novosibirsk); Nesterikhin, Yu. Ye. (Novosibirsk); Ponomarenko, A. G. (Novosibirsk)

ORG: None

TITLE: Excitation of strong collisionless shock waves in a deuterium plasma

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 6, 1965, 119-121

TOPIC TAGS: shock wave, plasma wave, deuterium, ion temperature, hydrogen plasma

ABSTRACT: The authors showed earlier (Eksperimenty po besstolknovitel'noy udarnoy volne v plazme. Zh. eksperim. i teor. fiz., 1964, vol. 47, no. 8, p. 774) that in a rarefied plasma in a quasi-stationary magnetic field shock waves can be excited with a shock front width considerably smaller than the length of the free path of the ions. This article presents preliminary results of experiments on heating a hydrogen plasma by means of strong collisionless shock waves. The methods and equipment used are described. Experimental results confirm the theory that under conditions of excitation of strong collisionless shock waves and subsequent compression of the plasma by a current layer it is possible to achieve intensive heating of the ions. Optical and magnetic measurements on the first half-period do not reveal any appreciable instabilities, which according to the authors, is extremely important in the clarification of the mechanism in the formation of the neutrons. The temperature of the ions, estimated in the expectation of the thermonuclear mechanism of the formation of neutrons,

Card 1/2

L 14982-66
ACC NR: AP6002366

proved to be ~ 10 kev with $n \leq 10^{13}$ cm^{-3}, which corresponds to data obtained by means of an analyzer of charged particles by energies and magnetic probes. Authors thank G. I. Budker for constant attention and interest in the work, and R. Z. Sagdeyev for participation and assistance in a discussion of the experimental results. Orig. art. has: 4 figures.

SUB CODE: 20 / SUBM DATE: 17Nov64 / ORIG REF: 003

Card 2/2

ISKOL'DSKIY, A.M.; KURTMULLAYEV, R.Kh.; NESTERIKHIN, Yu.Ye.; PONOMARENKO, A.G.

Experiments on a collisionless shock wave in a plasma. Zhur. eksp. i teor. fiz. 47 no.2:774-776 Ag '64. (MIRA 17:10)

1. Institut yadernoy fiziki Sibirskogo otdeleniya AN SSSR.

KURTMULLAYEV, R.Kh. (Novosibirsk); MALINOVSKIY, V.K. (Novosibirsk); NESTERIKHIN, Yu.Ye. (Novosibirsk); PONOMARENKO, A.G. (Novosibirsk)

Excitation of strong collisionless shock waves in a plasma. PMTF no.2: 79-83 Mr-Ap '65. (MIRA 18:7)

L 40901-66 EWP(m)/EWT(l) IJP(c) AT/WW

ACC NR: AP6020549 SOURCE CODE: UR/0414/66/000/001/0003/0028

AUTHOR: Berezin, Yu. A. (Novosibirsk); Kurtmullayev, R. Kh. (Novosibirsk); Nesterikhin, Yu. Ye. (Novosibirsk)

65
B

ORG: none

TITLE: Collisionless shock waves in a rarefied plasma

SOURCE: Fizika goreniya i vzryva, no. 1, 1966, 3-28

TOPIC TAGS: plasma shock wave, shock wave front, shock wave analysis, rarefied plasma, shock wave structure

ABSTRACT: The author discusses the theory of the structure of shock waves, dispersion effects, shock waves with an oscillatory structure, collisionless dissipation, shock waves with an aperiodic profile, conditions for exciting waves, devices used to excite strong shock waves, the basic method of plasma diagnosis, dynamics of cylindrical waves, and the structure of a shock wave and physical phenomena at the front. The problem of shock waves includes a wide scope of physical phenomena such as dispersion of plasma oscillations, microscopic instabilities, collisionless damping, and others. The interest shown in collisionless shock waves is to a considerable extent due to the fact that instabilities developing at the wave front and the

Card 1/2 UDC: 532.593+533.9.07

L 40901-66

ACC NR: AP6020549

O

phenomenon of the so-called "reversal" of strong shock waves can lead to an effective dissipation of energy and heating of plasma. The indicated phenomena are also of value for understanding processes occurring in the interplanetary medium, for example the interaction of the solar wind with the geomagnetic field. Unfortunately, the structure of a shock wave and its width has still not been investigated in space experiments, but apparently this will be done in the near future owing to the increasing volume of work being performed on satellites and rockets. Orig. art. has: 14 figures and 11 formulas.

SUB CODE: 20/ SUBM DATE: 16Dec65/ ORIG REF: 021/ OTH REF: 017

ne/

Card 2/2

ACC NR: AP7000636 SOURCE CODE: UR/0414/66/000/003/0003/0011

AUTHOR: Berezin, Yu. A. (Novosibirsk); Kurtmullayev, R. Kh. (Novosibirsk)

ORG: none

TITLE: Cylindrical waves in a diluted plasma in presence of strong collisionless dissipation

SOURCE: Fizika goreniya i vzryva, no. 3, 1966, 3-11

TOPIC TAGS: plasma magnetic field, plasma shock wave, rarefied plasma

ABSTRACT: A study of collisionless shocks propagating in laboratory plasmas is reported. A cylindrical symmetric two-fluid system subjected to externally applied magnetic fields varying sinusoidally is considered theoretically. The numerical solutions obtained for the magnetic field distribution in the plasma at various times show that this model is sufficient to account for the experimentally observed field structure if an arbitrary constant dissipation is assumed. This work allows one to establish regions in which the wave is formed, becomes quasistationary and changes over to a flow with rapidly increasing field near the plasma axis. It is also shown that the magnetic piston behind the wave front determines the behavior of the wave, influencing strongly the ratio of the magnetic field at a particular phase to that of the plasma density. A table of plasma parameters sufficiently varying is provided, allowing the application-

Card 1/2 UDC: 532.593+533.9.07

ACC NR: AP7000636

of the results of this study to laboratory plasmas that are not collision-dominated. Discussion of the dissipation on the wave structure shows the importance of collective effects which must be assumed to explain experimental results. Orig. art. has: 8 figures, 8 formulas.

SUB CODE: 20/ SUBM DATE: 19Apr66/ ORIG REF: 004/ OTH REF: 002

Card 2/2

BONDAROVICH, A.G., KURTO, I.P., ROZOVSKIY, L.N.

Treating pemphigus with rabies vaccine. Sbor.nauch.rab.Bel.nauch.-issl.kozhno-ven.inst. 4:73-77 '54 (MIRA 11:7)
(PEMPHIGUS)
(RABIES)

VETOKHIN, I.A., KURTO, I.P.

Cardiac diseases in the initial stages of syphilis. Sbor.nauch. rab.Bel.nauch.-issl.kozhno-ven.inst. 4:186-190 '54 (MIRA 11:7)
(HEART--DISEASES)
(SYPHILIS)

VALYAVKO, Vasiliy Vasil'yevich; KURTO, Ye., red.; VARENIKOVA, V., tekhn. red.

[Cybernetics serves mankind] Kibernetika sluzhit cheloveku. Minsk, Gos.izd-vo BSSR. Red. detskoi i iunosheskoi lit-ry, 1963. 126 p. (MIRA 16:6)
(Automatic control) (Cybernetics)

KURTONIN, Ya., polkovnik, kand. istoricheskikh nauk

The October Revolution, a radical turn in the history of mankind. Komm. Vooruzh. Sil 4 no.2:69-75 Ja '64.
(MIRA 17:9)

MOLNAR, P.; KOVACS, K.; TIBOLDI, T.; KURTOSI, L.; VARADY, I.

New contributions on the malignancy expediting effect of thymus on extract on the Brown-Pearce carcinoma. Orv. hetil. 94 no.24:659-661 14 June 1953. (CIML 25:1)

1. Doctors. 2. Institute of Pathological Anatomy and Pathohistology (Director -- Prof. Dr. Bela Korpassy) of Szeged Medical University and Szeged Municipal Council Hospital (Director -- Dr. Pal Molnar).

KURTOV, Igor

"Rumanian zootechnical and veterinary science on the way to the Michurin biology."

Veterinariya, Vol. 37, No. 2, 1960, p. 73

(KURTOV, Igor) - Doktor, starshiy sovetnik Glabnogo nauchno-tekhnicheskogo upravleniya Ministerstva sel'skogo i lesnogo khozyaystva Rumynskoy narodnoy Respubliki

KURTOV, I. F.

USSR/Engineering - Foundry, Equipment Feb 52

"On the Devices for Controlling Gas Permeability," I. F. Kurtov, Cand Tech Sci, Gor'kiy Polytech Inst

"Litey Proizvod" No 2, pp 14, 29

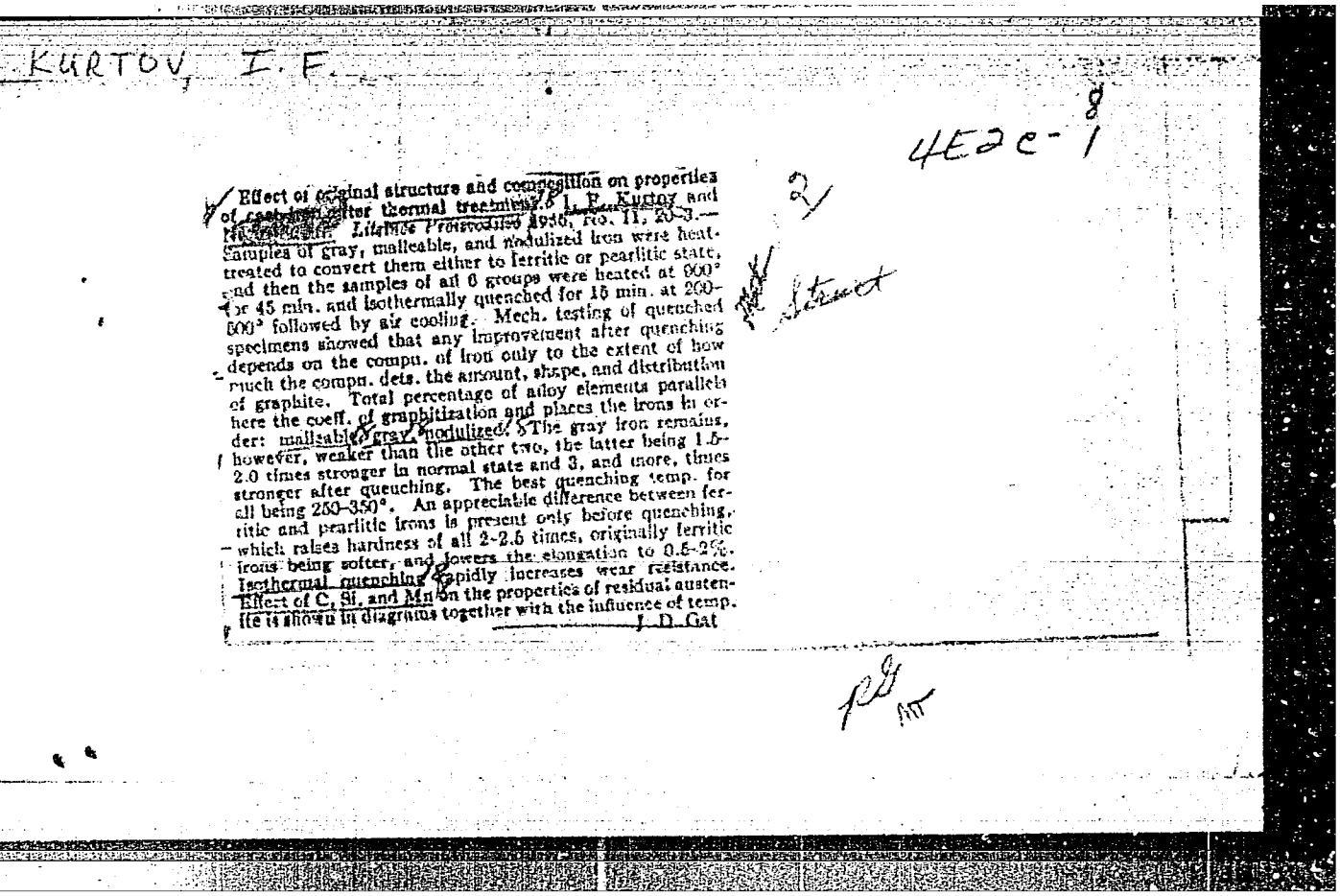
Briefly reviews existing instruments for testing gas permeability of molding and core mixts, discussing their shortcomings, and describes improved tester with mech or magnetic seal designed and used at Gor'kiy Automobile Plant imeni Molotov. New design entirely eliminates mercury and rubber as materials for isolating test specimen from surrounding medium.

207T43

KURTOV, I. F.

(2)

Wear resistance of isothermally hardened cast iron. I. F. Kurtov and N. V. Sadin. *Liteinoe Proizvodstvo* 1952, No. 12, 28–31.—Cylinder liners contg. C 3.6–3.7, Si 2–2.5, Mn 0.6–0.7% were chilled and sand cast. Some of the former were annealed, others isothermally hardened. Irons isothermally quenched to 302–359 Brinell showed in a wear-testing machine a wear resistance 3 times greater than that of pearlitic cast iron and ten times higher than that of ferritic cast iron. Liners isothermally quenched to 363–393 Brinell had their resistance raised to five times that of pearlitic irons, and showed a better performance when run in a motor. Tested as chain links, isothermally treated irons had wear resistance 2–5 times greater than that of pearlitic gray iron and 4 to 10 times higher than the resistance of ferrito-pearlitic irons. Best results with these castings were obtained by heating them at 875–950° for 30–60 min. depending on their cross section followed by isothermal quenching for 10–30 min. at 250–400°. Curves and tables provide numerical information. I. D. Gat



KURTOV, I. F.

4E2e-1

Effect of original structure and composition on properties of cast iron after thermal treatment. I. F. Kurtov and [illegible]. *Liteinoe Proizvodstvo* 1956, No. 11, 29-3.—Samples of gray, malleable, and modulized iron were heat-treated to convert them either to ferritic or pearlitic state, and then the samples of all 6 groups were heated at 900° for 45 min. and isothermally quenched for 15 min. at 290-300° followed by air cooling. Mech. testing of quenched specimens showed that any improvement after quenching depends on the compn. of iron only to the extent of how much the compn. dets. the amount, shape, and distribution of graphite. Total percentage of alloy elements parallels here the coeff. of graphitization and places the irons in order: malleable, gray, modulized. The gray iron remains, however, weaker than the other two, the latter being 1.5-2.0 times stronger in normal state and 3, and more, times stronger after quenching. The best quenching temp. for all being 250-350°. An appreciable difference between ferritic and pearlitic irons is present only before quenching, which raises hardness of all 2-2.5 times, originally ferritic irons being softer, and lowers the elongation to 0.5-2%. Isothermal quenching rapidly increases wear resistance. Effect of C, Si, and Mn on the properties of residual austenite is shown in diagrams together with the influence of temp.

J. D. Gat

Kurtov, I. F.

137-1957-12-23903

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 147 (USSR)

AUTHOR: Kurtov, I. F.

TITLE: To the Problem of Surface Alloying of Castings (K voprosu o poverkhnostnom legirovanii otlivok)

PERIODICAL: V sb.: Novoye v liteyn. proiz-ve. Nr 2 Gor'kiy, Knigoizdat, 1957, pp 127-138

ABSTRACT: An investigation was performed on the diffusion of C and Cr into a casting from a material applied to the surface of the mold. The experiments were carried out on cylindrical carbon steel samples of various diameters, cast by investment casting or in sand molds. It was established that an increase in the temperature of the mold from 20 to 850° will increase the concentration of C and Cr in the surface layer of the casting by 2 - 4 times; maintaining the casting in the mold at 850° for 3 hours increases the depth of penetration of C and Cr, but decreases their concentration on the surface of the casting. It was also found that the introduction of ground charcoal, or of a carburizer into the composition of the mold will prevent the decarbonizing of the surface of the casting. E. Sh.

Card 1/1

1. Cast steel-Surface alloying 2. Steel-Casting
2. Cast steel-Preparation

KURTOV, I.F.

KURTOV, I.F.; ZAKHAROV, V.A.; CHICHAGOVA, N.P.; RYABOKON', S.V.

Effect of bismuth and boron on curtailing the annealing of white iron. Lit.proizv. no.12:20-21 D '57. (MIRA 11:1)
(Iron-Bismuth-boron alloys--Metallography) (Iron--Heat treatment)

SOV/128-58-11-2/24

AUTHORS: Kurtov, I.F., Chichagova, N.P. and Zakharov, V.A.

TITLE: Eutecticity as a Technological and Qualitative Factor of Magnesium Cast Iron (Evtektichnost' kak faktor tekhnologichnosti i kachestva magniyevogo chuguna)

PERIODICAL: Liteynoye proizvodstvo, 1958, Nr 11, pp 3-4 (USSR)

ABSTRACT: To eliminate the technological deficiencies of magnesium cast iron, it is recommended to use cast iron of a eutectic composition, the positive effect of which on casting properties is explained by the minimum and constant temperature of its hardening. The technological process in the production of eutectic cast iron is simplified due to the minimum temperature of melting. The possibility to lower the cast iron temperature prior to modification without diminishing its casting qualities is a positive factor for its wider use in the machine-building industry. In the production of castings of different thickness, the proper pro-

Card 1/2

Eutecticity as a Technological and Qualitative Factor of Magnesium Cast Iron

portion of carbon and silicon for the furnace charge is selected and the silicon amount necessary for modification is added. There are 3 tables and 1 microphoto.

1. Iron-magnesium castings--Properties 2. Iron-magnesium castings --Casting 3. Iron-magnesium castings--Temperature factors 4. Eutectics--Applications

SOV/113-58-11-9/16

AUTHORS: Kurtov, I.F., Candidate of Technical Sciences, Platonov, B.P.

TITLE: The Reasons for the Formation, and the Prevention of Cracks in the Castings of Cylinder Blocks (Prichiny obrazovaniya i preduprezhdeniye treshchin v otlivkakh blokov tsilindrov)

PERIODICAL: Avtomobil'naya promyshlennost', Nr 11, 1958, pp 30 - 33 (USSR)

ABSTRACT: The Gor'kiy Motor Vehicle Plant employs diverse methods of crack prevention in the casting of cylinder blocks of the GAZ-51 automobile. Crack formation occurs mostly in the wall of the valve box, the central cylinders, the wall of the crankcase, the wall of the water jacket, and the ducts to the technologically necessary plug-stoppered openings. The reasons for crack appearance in such parts upon casting are given, and solutions for their avoidance are presented. These solutions include data on the chemical composition of the casting material, casting methods and mathematical formulae. There are 10 sets of diagrams, 1 graph and 1 table.

ASSOCIATION: Gor'kovskiy avtozavod (The Gor'kiy Automobile Plant)

Card 1/1 1. Materials--Casting 2. Materials--Fracture 3. Materials --Deformation 4. Materials---Properties

SOV/113-58-12-11/17

AUTHORS: Kurtov, I.P., Candidate of Technical Sciences, Ponomarev, A.V., Zakharov, V.A., Chichagova, N.P., Sveshnikov, D.A.

TITLE: Experience in Manufacturing Cast Crankshafts (Opyt izgotovleniya litykh kolenchatykh valov)

PERIODICAL: Avtomobil'naya promyshlennost', 1958, Nr 12, pp 33 - 37 (USSR)

ABSTRACT: At the Gor'kiy Automobile Plant, the casting of crankshafts for the engine of the "Volga" automobile has been developed. The casting of crankshafts reduces the consumption of metal. A comparison of a forged and a cast shaft is given in Table 1. The chemical composition of the metal and the thermal processing are very important for the casting. The cast iron should contain a high percentage of manganese and chromium and a low percentage of sulfur (Table 2). The iron is prepared in the basic furnace DSN-3. As a furnace charge, cast iron types LK-4, LK-3, LK-2, ferro-chromium Khr6, etc, are used. The cast iron is modified by metallic magnesium in the autoclave under a pressure of 5.0-5.5 atm. The casting molds are made of a mixture of 92% quartz sand, type K-70/140, and 8 % powderized bakelite. The molds are manufactured on an automatic two-position machine AKF-2

Card 1/2

(Figure 3). The hot molds are taken from the conveyer and put into special adjusting devices for cooling (Figure 4). After this they are fastened with cramps on a conveyer (Figure 6). The casting is done in a horizontal position (Figure 7). Table 3 shows the mechanical properties of samples taken out of crankshafts. It has been shown that the wear-resistance is adequate. There are 8 photos, 3 tables, and 4 references, 3 of which are Soviet and 1 English.

ASSOCIATION: Gor'kovskiy avtozavod (Gor'kiy Automobile Plant)

3/137/61/000/006/079/092
A005/A101

AUTHOR: Kurtov, I.F.

TITLE: On the problem of wrought-iron modification with bismuth, boron and aluminum

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 6, 1961, 3, abstract 6I22 ("[Tr.] Gor'kovsk. politekhn. in-ta", 1959, v. 15, no. 6, 72-84)

TEXT: Modification of wrought iron reduces the annealing cycle by 25-35% on account of B. Bi in wrought iron, if there is B and Al, makes it possible to obtain in the ingots a white iron structure. The mechanical properties of modified cast iron ingots do not change. Fluidity and volume shrinkage of cast iron are improved, as a result of complex modification of B and Al, to different degrees. Volume shrinkage of white iron decreases by 30%. The equivalence of Bi and Si, equal to 100, was established; this was the basis of studies proving the possibility of a further reduction of the annealing cycle by increasing the Si amount in cast iron, preserving the mechanical properties of KCh-35-10

Card 1/2

S/137/61/000/006/079/092
A006/A101

On the problem of wrought iron modification ...

(KCh-35-10) grade cast iron. The assimilation of wrought iron modification requires the removal of gaseous products, formed in the course of the modification process. There are 11 references.

A. Savel'yeva

[Abstracter's note: Complete translation]

Card 2/2

18(2)

SOV/128-59-8-15/29

AUTHOR: Kurtov, I.F., Candidate of Technical Sciences, Zakharov, V.A., Chichagova, N.P., and Ryabokon', N.P., Engineers

TITLE: Production of Malleable Iron Processed with Bismuth and Boron

PERIODICAL: Liteynoye proizvodstvo, 1959, Nr 8, pp 31 - 34 (USSR)

ABSTRACT: About 30,000 tons of castings have already been made from malleable iron which was inoculated by bismuth and boron in the Gor'kiy automobile plant. The melting of malleable iron is done by the double-process (cupola furnace and electric furnace) using 40% iron and 40% steel from waste materials, further, 3 - 3.5% of ferrosilicium from the blast-furnace and the rest of the fresh iron from other plants. The content of other elements is given in table 1. The grained bismuth and ferro-silico-boron is added during the outflow of iron from the electric furnace by means of an automatic dosage device. At the same time, pieces of aluminum, weighing 0.12 - 0.15 kg are added to the melted iron. Generally 0.002% of boron and 0.003% of

Card 1/3

Production of Malleable Iron Processed with Bismuth and Boron.

bismuth are added to the weight of the melted iron. The mechanical characteristics of this modified malleable iron are the same as of iron KCh - 35-10 (Table 2). The casting characteristics were studied on the casted spirals (Fig 2) and are mentioned in table 3. The fluidity of this inoculated iron increases 7%. The casting spoilage is the same as with castings from other non-modified iron. The percentage of Si can be increased from 1.3% to 1.72% (Fig 4) that shortens the graphitization process 5 times. Also the process of annealing decreases 27%. This enables savings of 2.65 million rubles in a year. For removal of gases, a special, powerful and mobile ventilation machine is installed. For an estimation of boron in the iron, the spectrographs ISP-22 or SP-28 were used (analytic lines are of B - 2497.7 Å and of Fe - 2496.5 Å). For a quantitative estimation of boron, a microphotometer MF-2 was used which enables evaluation of a concentration of 0.0005 - 0.004%. The bismuth was estimated by the photocolorimetric

Card 2/3

Production of Malleable Iron Processed with Bismuth and Boron

method. There are 3 photographs, 1 graph, 4 tables and 10 references, 9 of which are Soviet and 1 English.

Card 3/3

PHASE I BOOK EXPLOITATION SOV/4544

Soveshchaniye po teorii liteynykh protsessov, 4th

Kristallizatsiya metallov; trudy soveshchaniya (Crystallization of Metals; Transactions of the Fourth Conference on the Theory of Casting Processes) Moscow, Izd-vo AN SSSR, 1960. 325 p. 3,200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya.

Resp. Ed.: B. B. Gulyayev, Doctor of Technical Sciences, Professor; Ed. of Publishing House: V. S. Rzheznikov; Tech. Ed.: S. G. Tikhomirova.

PURPOSE: This book is intended for metallurgists and scientific workers. It may also be useful to technical personnel at foundries.

COVERAGE: The book contains the transactions of the Fourth Conference (1958) on the Theory of Casting Processes. [The previous 3 conferences dealt with hydrodynamics of molten metals (1955), solidification of metals (1956), and shrinkage processes in castings (1957)]. General problems in the crystallization of metals, including the crystallization of constructional steels, alloy steels with special properties, cast iron, and of nonferrous alloys, are discussed. Recognition is given to D. K. Chernov and N. T. Gudtsov and their students, B. B. Gulyayev and A. G. Spasskiy, for their contributions to the understanding of the basic problems involved in the theory of crystallization of ferrous and nonferrous metals and alloys. Academician A. V. Shubnikov is also mentioned in connection with his work on the planning of research on crystal formation. References accompany several of the articles.

Kurtev, I. F.

18.1111

33820
S/137/62/000/001/135/237
A052/A101

AUTHOR: Kurtov, I. F.

TITLE: Modified wrought iron as a substitute of steel for castings and forgings

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 30, abstract 1I202 (V sb. "Novoye v liteyn. proiz-ve. No. 3", Gor'kiy, 1960, 93 - 101)

TEXT: A modification process for wrought iron was introduced at the Gor'kiy automobile plant. The process made it possible to cut the annealing time of castings in compartment furnaces by 50%, from 58 to 29 hours. A modifier or a combination of modifiers consisting of Al, B and Bi in a crushed state (except Al) is supplied in a paper package on the flow of metal as the ladle is being filled from the furnace. The modification time is 1 - 2 minutes. Al and B making up respectively 0.015% and 0.003% of the molten metal weight are active graphitizers. Al and B by forming, besides CrB and Al_2O_3, nitrides neutralize basic elements, namely N, O and Cr, which stabilize cementite. Modified wrought iron is a new structural material substituting steel castings and forgings.
[Abstracter's note: Complete translation] A. Savel'yeva

Card 1/1

KURTOV, M.B.

Treatment of acute necrotizing delhi boil with chicory ash.
Zdrav. Turk. 7 no.4:40-41 Ap'63. (MIRA 16:6)

1. Iz Turkmenskogo nauchno-issledovatel'skogo instituta kozhnukh bolezney (dir. - M.E.Ereshov, nauchnyy rukovoditel' - prof. N.F.Rodyakin).
(DELHI BOIL) (CHICORY--THERAPEUTIC USE)

KURTOV, V.M.; PODPRYADOV, B.N.

Creation of track workers' cities is an urgent problem. Put' i put. khoz. 9 no.11:9 '65. (MIRA 18:11)

1. Starshiye inzhenery Gosudarstvennogo instituta tekhniko-ekonomicheskikh izyskaniy i proyektirovaniya zheleznodorozhnogo transporta.

ISENZHULOV A.I.; BOL'SHAKOVA, Ye.V. [deceased]; KURTOVA, A.F.

Inheritance and variability of the wool yield and its length in the process of interspecific hybridization of the Arkhara with fine-wool sheep. Trudy Inst. eksp. biol. AN Kazakh. SSR 11:152-159 '65.
(MIRA 18:10)

MARTYNOVA, O.I. (Moskva); SAMOYLOV, Yu.F. (Moskva); KURTOVA, I.S. (Moskva)

Solubility of calcium sulfate in water vapor with high and superhigh parameters. Izv. AN SSSR. Energ. i transp. no.3:132-136 My-Je '65. (MIRA 18:12)

1. Submitted January 6, 1965.

ACC NR: AP6034277 (N) SOURCE CODE: UR/0281/66/000/005/0129/0134

AUTHOR: Martynova, O. I. (Moscow); Samoylov, Yu. F. (Moscow); Kurtova, I. S. (Moscow)

ORG: None

TITLE: Solubility of calcium chloride in water vapor of high and superhigh parameters

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 5, 1966, 129-134

TOPIC TAGS: solubility, calcium chloride, hydrolysis, water vapor

ABSTRACT: Experimental data on the solubility of calcium chloride and its products of hydrolysis in water vapor are thermodynamically analyzed. Empirical formulas are derived for determining calcium contamination of chlorinated water vapor at high and superhigh pressures and temperatures in power installations. Nomographic solutions are given for these equations which are applicable to a broad range of vapor parameters. These nomograms may be used to determine the solubility of calcium chloride and its products of hydrolysis in water vapor as a function of temperature and pressure. Orig. art. has: 5 figures, 2 tables, 3 formulas.

SUB CODE: 07/ SUBM DATE: 10May66/ ORIG REF: 009

Card 1/1

UDC: 541.8:661.44;621.1.013

AUTHOR: Petrenko, A.G., Smirnova, A.V. and Kurtova, L.A. 133-5-18/27

TITLE: Plasticity of cold rolled transformer steel (Plastichnost' kholodnokatanoy transformatornoy stali)

PERIODICAL: "Stal'" (Steel) 1957, No.5, pp. 453 - 456 (U.S.S.R.)

ABSTRACT: An investigation of the microstructure of specimens of cold rolled transformer steel, produced in the Kuznetsk Works and rolled in the Novosibirsk Works, was carried out. It was found that along the grain boundaries and inside silicon-ferrite grains a carbide phase containing silicon was present. In specimens of unsatisfactory plasticity the separated carbide phase of a peculiar form is situated along grain boundaries and inside grains, while in specimens with satisfactory plasticity the carbide phase is separated in the form of globules, mainly inside the grains of silicon ferrite. Total proportion of the carbide phase in brittle specimens is higher than in non-brittle ones. Secondary heat treatment at 750 - 850 °C decreases the amount of carbide phase and increases the plasticity of steel. The microstructures of various specimens with an indication of the etching method used is shown in Figs. 1-6. There are 6 figures and 4 references, 2 of which are Slavic.

Card 1/2

Plasticity of cold rolled transformer steel. (Cont.)

133-5-18/27

ASSOCIATION: TsNIIChM

AVAILABLE:

Card 2/2

18.5100,18.7100

77462
SOV/133-60-1-23/30

AUTHORS: Petrenko, A. G., Kurtova, L. A., Chub, G. F., Ioffe, M. M., Popov, B. N., Sterlin, R. L. (Engineers)

TITLE: Physical Metallurgy and Heat Treatment. The Effect of Intermediate Annealing in Hydrogen on Specific Losses of Cold-Rolled Transformer Steel

PERIODICAL: Stal', 1960, Nr 1, pp 71-73 (USSR)

ABSTRACT: This is a brief report concerning the experimental production that proposed to establish the possibility of decreasing carbon content in the transformer steel. The intermediate annealing in bell furnaces (with protective atmosphere of DKh-gas--a mixture of coke and blast furnace gas) was replaced by annealing in tunnel-type furnace and bell furnace with the protective atmosphere of dry hydrogen. M. I. Veklich, V. Ye. Spiridonov, G. G. Kuznetsov, and G. N. Novikov participated in the work. The investigated steel had following chemical composition: C, 0.02-0.04; Mn, 0.08-0.14; Si, 2.90-3.26; P, 0.004-0.007; S, 0.005; Cu, traces-

Card 1/6

Physical Metallurgy and Heat Treatment. The Effect of Intermediate Annealing in Hydrogen on Specific Losses of Cold-Rolled Transformer Steel

77462
SOV/133-60-1-23/30

0.08; Ni, 0.03-0.15. The results of tests of steel under various conditions are given in Tables 1, 2, and 3. The authors arrived at the following conclusions. (1) The application of double decarburization annealing of the strip 0.85-0.70 and 0.50-0.35 mm thick in a tunnel-type furnace in hydrogen atmosphere facilitates the production of steel with lower carbon content and smaller specific losses than in the case of intermediate annealing of steel in bell furnaces in DKh-gas atmosphere. (2) The cold-rolled transformer steel of investigated melts, which passed the double intermediate annealing in the tunnel-type furnaces in the atmosphere of dry hydrogen (and after high-temperature annealing of sheets in the vacuum and additional annealing for elimination of work-hardening), has magnetic induction B_{25} from 18,700 to 19,300 gauss, and specific losses for sheets 0.50 mm thick P_{10} from 0.80 to 0.84 and P_{15} from 1.72 to 1.86 watt/kg, and for sheets 0.35 mm thick P_{10} from

Card 2/6

77462, SOV/133-60-1-23/30

Table 1. Electric and magnetic properties of cold-rolled transformer steel, which passed through the intermediate annealing in bell furnace in DKh-gas atmosphere (A) and in tunnel furnace in hydrogen atmosphere (B).

Thickness of strip (mm)	Nr of melts	A							Nr of melts	B						
		Specific losses (watt/kg)			Magnetic induction (gauss)					Specific losses (watt/kg)			Magnetic induction (gauss)			
		P_{10}	P_{15}	P_{17}	B_{10}	B_{25}	B_{50}	B_{100}		P_{10}	P_{15}	P_{17}	B_{10}	B_{25}	B_{50}	B_{100}
0,50	26422	1,07	2,31	3,10	17000	18430	19300	19750	26422	0,97	2,05	2,77	17900	18900	19500	19900
	26004	1,02	2,12	3,09	16990	18350	19050	19550	26004	0,91	2,00	2,76	17900	18950	19500	19850
	25955	0,97	2,10	2,88	17350	18770	19380	19800	25955	0,89	1,95	2,70	18000	18800	19450	19850
	AVERAGE	1,02	2,18	3,05	17110	18520	19230	19700	AVERAGE	0,92	2,00	2,74	17930	18880	19480	19870
0,35	26488	0,80	1,72	2,35	18200	18800	19450	19850	26347	0,67	1,45	1,94	18000	18700	19350	19700
	25010	0,78	1,68	2,26	18700	19100	19550	19950	26391	0,76	1,61	2,13	18300	19000	19500	19850
	26847	0,82	1,85	2,57	17400	18100	18700	19300	26367	0,69	1,50	2,04	17300	18800	19450	19850
	26965	0,73	1,48	1,95	19000	19300	19700	20100	26469	0,68	1,43	1,94	18300	19050	19600	19800
	26106	0,79	1,80	2,47	17200	18300	18850	19450	25803	0,67	1,37	1,80	18200	19000	19400	19750
	27142	0,81	1,72	2,35	17800	18700	19250	19750	25906	0,71	1,49	1,98	18600	19000	19500	19800
	27040	0,76	1,68	2,32	18200	18600	19300	19800	26416	0,70	1,54	2,08	18600	19000	19550	19850
	26847	0,70	1,49	2,00	18700	19300	19800	20150	25740	0,72	1,50	1,96	18200	18950	19450	19800
	AVERAGE	0,77	1,68	2,28	18150	18770	19320	19790	AVERAGE	0,70	1,48	1,98	18180	18930	19470	19800

Card 3/6

Table 2. Electric and magnetic properties of annealed (in tunnel furnace in hydrogen atmosphere) cold-rolled transformer steel after addition annealing.

THICKNESS OF STRIP (mm)	No. of FIELDS	SPECIFIC LOSSES (WATT/KG			MAGNETIC INDUCTION (GAUSS)			
		P_{10}	P_{15}	P_{17}	B_{10}	B_{25}	B_{50}	B_{100}
0.50	26422	0,84	1,86	2,52	17800	19150	19650	19950
	26004	0,80	1,72	2,42	18300	19000	19550	19900
	25955	0,83	1,80	2,53	18100	19000	19550	19900
	AVERAGE	0,82	1,79	2,49	18060	19050	19580	19915
0,35	26347	0,67	1,22	1,69	18300	19000	19600	19950
	25391	0,66	1,41	1,93	18200	19100	19700	20000
	26367	0,64	1,40	1,99	18400	18700	19300	19700
	26169	0,63	1,31	1,80	18600	19300	19750	19950
	26303	0,62	1,29	1,69	18300	19300	19600	19860
	25905	0,60	1,25	1,67	18600	19100	19600	19900
	26418	0,66	1,41	1,92	18500	19000	19600	19900
	25740	0,65	1,38	1,88	18700	19050	19500	19760
	AVERAGE	0,63	1,33	1,82	18450	19060	19580	19870

Card 4/6

Table 3. Electric and magnetic properties of cold-rolled transformer steel, which passed through the intermediate and final high-temperature annealing in coils in bell furnace in the atmosphere of dry hydrogen.

Thickness of strip mm	Melts	Specific losses watt/kg			Magnetic induction gauss			
		P_{10}	P_{15}	P_{17}	B_{10}	B_{15}	B_{81}	B_{100}
0,50	26422	1,01	2,11	2,92	17700	19000	19450	19950
	26004	0,96	2,06	2,82	18400	19260	19700	19950
	25955	0,96	2,14	2,95	17900	19050	19700	20000
	Average	0,97	2,11	2,89	18000	19080	19680	19970
0,35	26347	0,82	1,60	2,23	17900	18400	19000	19500
	26367	0,66	1,44	1,96	18800	19200	19700	20150
	25955	0,73	1,67	2,30	17650	18650	18900	19500
	20469	0,68	1,46	1,99	18600	19100	19650	19900
	25803	0,69	1,46	1,96	18600	19200	19700	20000
	25906	0,80	1,67	2,20	17900	18550	19200	19700
	26116	0,68	1,50	2,02	18800	19150	19650	19950
	25740	0,68	1,50	2,01	18750	19050	19550	19850
	Average	0,71	1,56	2,08	18370	18840	19420	19810

Card 5/6

0.57 to 0.66 and P_{15} from 1.22 to 1.41 watt/kg. (3)

For manufacturing of higher grades of transformer steel according to the All-Union State Standard 802-58 (GOST 802-58) it is advisable to build at the metallurgical plants the tunnel-type furnaces, which assure the most intensive decarburization (heating in dry hydrogen, holding in humid, reaching the strip (counter to its movement) on both sides by hydrogen). The intermediate annealing in the tunnel-type furnace, with tension of heated (to 750-800° C) strip, results also in the diminishing of its waviness and warping. There is 1 figure; 3 tables; and 2 Soviet references.

ASSOCIATION: Central Scientific Research Institute of Ferrous Metallurgy and the "Zaporozhstal'" and "Electrostal'" Plants (TsNIIChM i zavody "Zaporozhstal'" i "Elektrostal'")

SOV/133-59-3-25/32

AUTHORS: Petrenko, A.G., Kurtova, L.A., Petlyakov, M.M. and Belyakov, A.I.

TITLE: Heterogeneity of Magnetic Properties of Cold-rolled Transformer Steel (Neodnorodnost' magnitnykh svoystv kholodnokatanoy transformatornoy stali)

PERIODICAL: Stal', 1959, Nr 3, pp 267 - 268 (USSR)

ABSTRACT: During the production of cold-rolled transformer steel on the Novosibirsk Works, some lots of sheets possessed unsatisfactory magnetic properties. On inspection of the surface of rejected sheets, zones with a fine-grain structure were noticed. Metallographic investigations indicated that in the fine-grain zones the edge of the cube [OC] of nearly each individual grain formed an angle with the direction of rolling while in the remaining metal practically all grains were orientated along the rolling direction. The absence of the necessary texture was also confirmed by magnetic anisotropy (Figure 1). Re-annealing at 1 200 °C in hydrogen of faulty sheets did not improve their magnetic properties. The presence of the above fine-grain zones can be explained either by their higher carbon content (from traces of grease films from rolling which

Card1/2

Heterogeneity of Magnetic Properties of Cold-rolled Transformer Steel

SOV/133-59-3-23/32

carburised the affected spots) or small amounts of Mn, Cu, Ni or N or by the presence of non-metallic inclusions. It is concluded that in order to obtain good quality transformer steel without fine-grain zones, it is necessary to prevent the contamination of the metal and a more complete decarburisation of steel.
There are 2 figures, 1 table and 6 references, 5 of which are Soviet and 1 English.

ASSOCIATIONS: TsNIIChM and Novosibirskiy metallurgicheskiy zavod (Novosibirsk Metallurgical Works)

Card 2/2

S/153/60/003/006/001/009
B103/B206

AUTHORS: Kindyakov, P. S., (Deceased) Kurtova, L. V.

TITLE: Isothermal lines at 25°C of the Systems Li_2SO_4 - Na_2SO_4 - H_2O and Li_2CO_3 - Na_2CO_3 - H_2O

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, v. 3, no. 6, 1960, 967-969

TEXT: The authors report on the isothermal lines at 25°C of the systems a) Li_2SO_4 - Na_2SO_4 — H_2O and b) Li_2CO_3 — Na_2CO_3 — H_2O, checked by them in view of the fact that data on solubility available in publications are contradictory (Refs. 1-10). The systems reached equilibrium after 8 to 10 days. The method of graphic and optical-crystal analysis was used besides the determination method by Schreinemakers for the composition of solid phases. In the system a), Li^+ and SO_4^{2-} were determined from a single weighed portion. To begin with, the total content of SO_4^{2-} ions was ascertained by

Card 1/3

Isothermal lines at 25°C of...

precipitation with $BaCl_2$. The initial salts were simultaneously converted into chlorides. LiCl was separated by means of n-propyl alcohol saturated with HCl and converted into sulfate which was weighed . (Ref. 11). In the system b), the CO_3^{2-} ion was determined volumetrically, and Li in the same way as in system a). In both cases the sodium content was established from the difference. As stated by the authors, the isothermal line in system a) at 25°C consists of 3 crystallization branches: the $Na_2SO_4 \cdot 10H_2O$ (from 0 to 6.98% by weight Li_2SO_4 in the solution), the $Li_2SO_4 \cdot 3Na_2SO_4 \cdot 12H_2O$ (from 6.98 to 21.17% by weight Li_2SO_4 in the solution) and the $Li_2SO_4 \cdot H_2O$ (21.17 to 2563% by weight of Li_2SO_4). These results agree well with those of other scientists (Refs. 7,8). It is finally noted that system b) at 25°C is a simple "eutonic" one; the composition of the "eutonic" product is very close to that ascertained previously (Ref. 9). E. V. Mikhal'chenko participated in the experimental part. There are 1 figure, 1 table, and 11 references: 5 Soviet-bloc and 2 non-Soviet-bloc.

Card 2/3

Isothermal lines at 25°C of...

S/153/60/003/006/001/009
B103/B206

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova; Kafedra tekhnologii redkikh i rasseyannykh elementov (Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov; Department of Rare and Trace Elements)

SUBMITTED: February 10, 1959

Card 3/3

69332

S/129/60/000/05/005/023
E193/E283

18.7100

AUTHORS: Teymer, D. A., Petrenko, A. G., and Kurtova, L. A., Engineers

TITLE: Protection Against Decarburization of High-Speed Cutting Steels During Annealing

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, Nr 5, pp 19-23 (USSR)

ABSTRACT: The object of the investigation, described in the present paper, was to develop a method of preventing decarburization of high-speed cutting steel during annealing which, at the same time, would give protection against oxidation, so as to eliminate the need for subsequent pickling, which, in the case of thin wire, may prove to be a difficult operation and may result in inferior surface finish and in considerable losses of the metal. The experimental work was carried on strip (1.5 to 3 mm thick) and wire (1 to 3 mm diameter) specimens, annealed in a salt bath, in vacuum and in various protective atmospheres (hydrogen, dissociated ammonia and the products of partial combustion of kerosene). Two steels were used in the experiments: steel P9 containing

Card 1/8

69332

S/129/60/000/05/005/023
E193/E283

Protection Against Decarburization of High-Speed Cutting Steels During Annealing

0.84% C, 3.98% Cr, 8.3% W, and 0.36% Mn, and steel P18 containing 0.76% C, 4.02% Cr, 15.89% W, 1.26% V, 0.40% Mn, and 0.13% Si. The degree of decarburization was determined by the method due to V. D. Sadovskiy. The experiments on the effect of dry and moist hydrogen, or dissociated ammonia atmospheres, were conducted in the apparatus illustrated in Fig 1, showing: 1 - gas flow meter; 2 - water; 3 - alumina gel; 4 - thermometer; 5 - three-way stopcock; 6 - annealed specimen; 7 - quartz tube. The gases were dried (to dew point of -50°C) by passing through regenerated alumina gel; oxygen was removed from hydrogen by passing it through a tube with titanium shavings heated to 900 to 1000°C. The annealing experiments (30 min duration) were carried out at various temperatures between 600 and 1000°C. The results are reproduced in Fig 2, where the depth of decarburization (mm) is plotted against the annealing temperature (°C). The results of other experiments are reproduced in Fig 3, where the depth of decarburization (mm) at 900°C is plotted against the duration (h) of the annealing

Card 2/8

Protection Against Decarburization of High-Speed Cutting Steels During Annealing

treatment, the four curves relating to experiments carried out in 1 - dry hydrogen, 2 - moist hydrogen, 3 - dry, dissociated ammonia, and 4 - moist dissociated ammonia. It will be seen that at temperatures above 600°C, neither moist nor dry hydrogen (or dissociated ammonia) can be used as a protective atmosphere for heat-treating high-speed cutting steels. In the next series of experiments, the suitability of products of partial combustion of kerosene for this purpose was studied. The apparatus used for the production of the protective atmosphere is illustrated in Fig 4, showing: 1 - electric motor; 2 - kerosene pump; 3 - kerosene filter; 4 - pressure regulator; 5 - pressure gauge; 6 - burner jet; 7 - air blower; 8 - throttle; 9 - ceramic housing of the burner; 10 - hole for igniting kerosene; 11 - combustion chamber; 12 - inspection hole; 13 - air heater; 14 - tube filled with coke; 15 - gas consumption meter; 16 - fabric filter;

Card 3/8

S/129/60/000/05/005/023
E193/E283

Protection Against Decarburization of High-Speed Cutting Steels During Annealing

17 - pressure gauge. The apparatus is operated in the following manner: with the aid of the pump, 2, kerosene is supplied to the burner 6 through filter 3 and pressure regulator 4. Air is supplied by the air blower 7 and is passed through the heater 13 before being mixed with kerosene in the burner where a highly combustible suspension of kerosene in air is formed. The mixture is burned in the combustion chamber 11, provided with fire-resisting lining and a horizontal partition which ensures good mixing of the combustion products. The products of partial combustion pass through a cooling column 14, filled with coke; in the upper part of this column, water is sprayed to cool and clean the combustion products which are later purified by passing through the fabric filter 16. The gas obtained in this apparatus contained 5 to 6% CO_2, 8 to 15% CO, 6 to 15% H_2 and up to 0.5% O_2. When an atmosphere with a low moisture content was required, the gas was dried with the aid of alumina gel; when necessary, CO_2 was removed by passing

S/129/60/000/05/005/023
E193/E283

Protection Against Decarburization of High-Speed Cutting Steels During Annealing

the gas through a vessel filled with 33% water solution of NaOH; the drying and purifying train is illustrated in Fig 5, showing a tube with cotton wool, flow meter, vessels with the NaOH solution and a tube with alumina gel. The CO_2 content in the purified gas did not exceed 0.5%. The heat-treatment experiments were carried out on specimens, measuring 20 x 25 mm, 0.6 to 1.5 mm thick, which were held at 900°C for 1 h and then cooled slowly to room temperature. The results are given in Table 1 under the following headings: preliminary treatment of the protective atmosphere (without drying and purifying treatment; ditto; ditto; ditto; drying; ditto; drying and removal of CO_2; ditto; ditto;); CO_2, CO, and H_2 content, %; dew point, °C; depth, mm of the decarburized layer. It will be seen that the products of partial combustion of kerosene require supplementary drying and purifying treatments to ensure full protection against decarburization of

Card 5/8

69332

S/129/60/000/05/005/023
E193/E283

Protection Against Decarburization of High-Speed Cutting Steels During Annealing

high speed cutting steel. In the next series of experiments, the suitability of the products of partial combustion of kerosene for intermittent annealing of wires, made of steels P8, P9K5 and Mo-6 (0.96% C, 0.44% Mn, 4.05% Cr, 5.65% Mo, 2.96% V), was studied. Coils of wire, 0.9 to 1.5 mm diameter, weighing 5 to 6 kg, were placed in a metal container which, after purging with the burnt gas, was inserted in a muffle furnace; the annealing operation consisted in heating the charge to 900°C, holding it at the temperature for 2 h, and cooling at the rate of 50°C/h. The same experiments were carried out in vacuum, in a salt bath, and in air, the heat treatment in the latter case consisting in heating the wire to 740°C, holding it at the temperature for 40 min, and cooling in water. It was found that the mechanical properties of steel are not significantly affected by the method of annealing, except when the heat-treatment is carried out in a salt bath, in which case a product, characterized by surface

Card 6/8 defects and non-uniformity of the mechanical properties, IX

Protection Against Decarburization of High-Speed Cutting Steels During Annealing

is obtained; in addition, a somewhat difficult washing operation is necessary when salt bath is used for heat-treating the wire. The degree of decarburization varied with the method of annealing employed, which also affected the drying characteristics of the annealed wire (i.e. the maximum total deformation between anneals). This is shown by the data given in Table 2 under the following headings: type of steel; σ_b, (UTS kg/mm^2), δ (elongation, %), and maximum deformation between anneals for material annealed in (a) air, (b) burnt kerosene gas, (c) vacuum and (d) salt bath. Best results, in this respect, were obtained when dried and purified products of partial combustion of kerosene were used as the protective atmosphere. Wires, made of steels P18, Mo-6 and P9K5, annealed in this atmosphere, could be drawn to 66, 55, and 80% total deformation, respectively. It would appear that the improvement in the drawing characteristics of wires, annealed in the atmosphere of partially burnt kerosene gas, can, to some extent, be

Card 7/8

69332

S/129/60/000/05/005/023
E193/E283

Protection Against Decarburization of High-Speed Cutting Steels During Annealing

attributed to the formation of soot (graphite deposit) on the wire surface, which acts as a lubricant. Several conclusions were reached. (1) Annealing the high speed cutting steel in the atmosphere of partially burnt kerosene gas, from which both H_2O and CO_2 have been removed, ensures freedom from decarburization and scale formation. (2) This protective atmosphere is effective at temperatures up to 900°C. (3) The method of annealing, studied during the present investigation, is of particular importance in annealing wire and other products of small cross-section. Acknowledgments are made to Ye. S. Morozova, who participated in this work. There are 5 figures, 2 tables and 2 Soviet references.

ASSOCIATION: TsNIIChERMET

Card 8/8

KINDYAKOV, P.S. [deceased]; KURTOVA, L.V.; APRAKSINA, G.Z.

Isotherm of the quaternary reciprocal aqueous system consisting of lithium and soldium carbonates and sulfates at 25°. Zhur.neorg.-khim. 6 no.12:2762-2765 D '61. (MIRA 14:12)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova, kafedra analiticheskoy khimii.
(Alkali metal sulfates) (Alkali metal carbonates)

PLYUSHCHEV, V.Ye.; KURTOVA, L.V.

Solubility of lithium carbonate in solutions of lithium chloride and nitrate at 25°. Zhur. neorg. khim. 8 no.10:2381-2383 '63. (MIRA 16:10)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. Lomonosova.

(Lithium carbonates) (Solubility)

KURTOVA, L.V.; BOL'SHAKOVA, L.P.; PHYUSHCHEV, V.Ye.

Study of equilibrium in the system $LiNO_3$ - $NaNO_3$ - H_2O at 25°.
Zhur. neorg. khim. 8 no.8:1993-1994 Ag '63. (MIRA 16:8)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.
(Alkali metal nitrates)
(Phase rule and equilibrium)

KURTOVA, L.V.; PLYUSHCHEV, V.Ye.; GORSHKOVA, G.K.

System $Li^+, Na^+ \parallel Cl^-, CO_3^{2-} - H_2O$ at 25°. Zhur. neorg. khim. 9 no.10:2458-2462 O '64. (MIRA 17:12)

1. Moskovskiy institut khimicheskoy tekhnologii im. M.V. Lomonosova.

PLYUSHCHEV, V.Ye.; KURTOVA, L.V.

System $Li^+, Na^+ \parallel NO_3^-, CO_3^{2-} - H_2O$ at 25 C. Zhur. neorg. khim. 10 no.6:1471-1476 Je '65. (MIRA 18:6)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

KURTOVIC, Dervis; KARAVANIC, Josip, inz.; BARCAL, Laslo, inz.; BEHLILOVIC, Fehim, inz.; RADOSEVIC, Nikola

Discussion on submitted reports and communications. Geod list 17 no. 4/6: 149-156 Ap-Je '63.

KURTOVIC, H.

Irregular functioning of electronic oscillators, p. 5

TELEKOMUNIKACIJE, Beograd, Vol 3, No. 4, Oct. 1954

SO: EEAL, Vol 5, No. 7, July, 1956

KURTOVIC, H.

KURTOVIC, H. Achieving sonorousness by means of the sonorous line. p. 1

Vol. 4, no. 2, Apr. 1955
TELEKOMUNIKACIJE
TECHNOLOGY
Beograd

SO: MONTHLY LIST OF EAST EUROPEAN ACCESSIONS, (EEAL), VOL 4, no. 9
Sept. 1955

YUGOSLAVIA/Acoustics - Architectural Acoustics J-7

Abs Jour : Ref Zhur - Fizika, No 9, 1958, No 21336

Author : ~~Kurtovic~~ Husnius S.
Inst : Not Given
Title : Intensity of Sound and Reverberation Time in Halls

Orig Pub : Telekomunikacije, 1957, 6, No 4, 1-6

Abstract : Critical review of formulas pertaining to the reverberation time and sound intensity in halls, given in the literature.

Card : 1/1

YUGOSLAVIA/Acoustics - Noise. J

Abs Jour : Ref Zhur Fizika, No 12, 1959, 28253

Author : Kurtovic, Hesnija
Inst : -
Title : Measurement of Sound Intensity

Orig Pub : Elektrotehn. vesn., 1958, 12, No 9-10, 295-296, 313

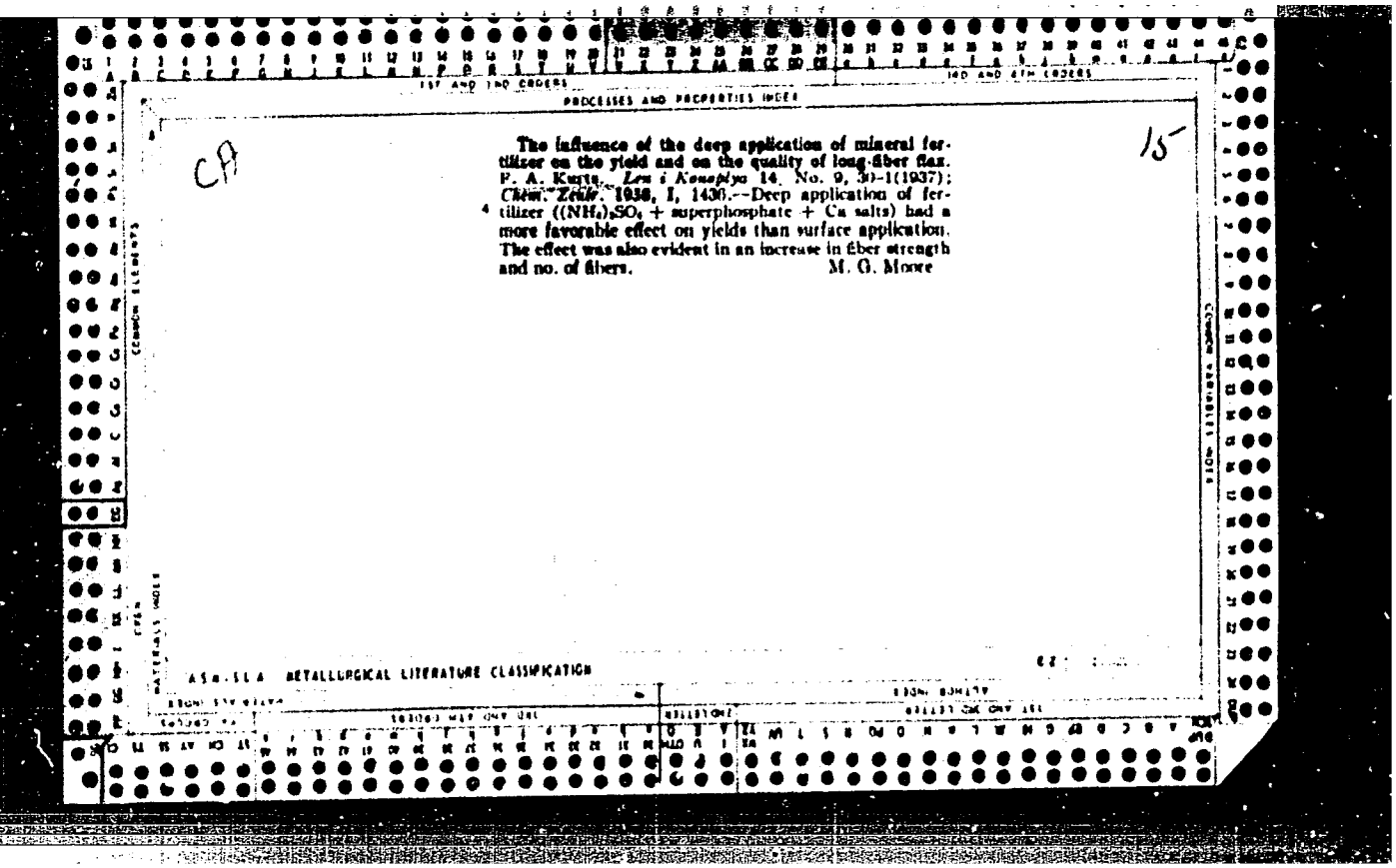
Abstract : A brief survey is given of methods of noise measurement. By way of an example, results of measurement of intensity of noise by various methods are given and compared.

Card 1/1

ANTONOV, V.K.; KURTS, A.L.

α-Substituted α-amino acids. Report No.9: Bromination of 4-methyl-2-trifluoromethyl-5-oxazolone. Izv.AN SSSR. Ser.khim. no.1:99-103 Ja '64. (MIRA 17:4)

1. Institut khimii prirodnykh soyedineniy AN SSSR.



PROCESSES AND PROPERTIES INDEX

CA

15

The influence of the deep application of mineral fertilizer on the yield and on the quality of long-fiber flax. P. A. Kurta. *Zem i Kooseplya* 14, No. 9, 30–1(1937); *Chem. Zentr.* 1938, I, 1430.—Deep application of fertilizer ($(NH_4)_2SO_4$ + superphosphate + Ca salts) had a more favorable effect on yields than surface application. The effect was also evident in an increase in fiber strength and no. of fibers. M. G. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

AD

Oxidation-reduction processes and relation of two forms of ascorbic acid in plants. F. A. Kurts. *Doklady Akad. Nauk S.S.S.R.* 72, 81-3(1950).—In freshly picked potato the dehydro form of ascorbic acid is higher by almost 50% than it is in 1-month stored samples. Similarly during the quiescent period of rye and winter wheat the equil. is largely in favor of dehydro form, with earlier planted specimens showing the greater shift, i.e. deeper resting state. Cutting of potato, tomato, or onion (several varieties of each) generally shifts the equil. toward the hydro form. G. M. Kosolapoff

KURTS, F. A.

Chemical Abst.
Vol. 48 No. 3
Feb. 10, 1954
Biological Chemistry

(1)

The role of ascorbic acid as carrier of hydrogen in plants. F. A. Kurts. *Biokhimiya* 18, 284-7(1953).—In the process of oxidation in plants the ascorbic acid is converted to dehydroascorbic acid and back again to its normal form, etc. It is concluded that in the biol. processes here dealt with ascorbic acid assumes the function of a catalyst.

B. S. Levine

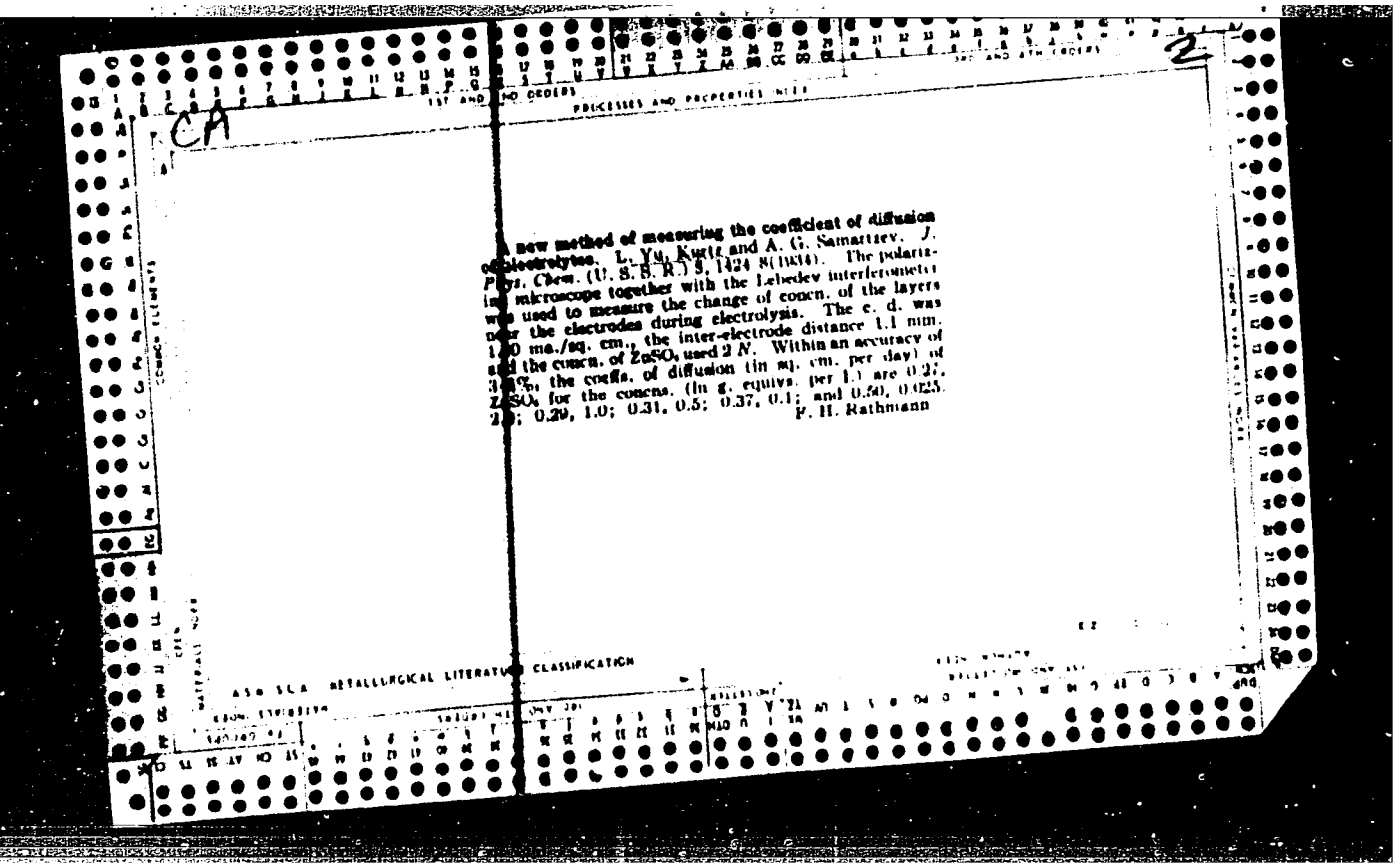
KURTS, F.A., kandidat biologicheskikh nauk (L'vov)

Interaction of plant seeds with environmental materials. Priroda 45 no.8:116 Ag '56. (MLRA 9:9)
(Seeds)

KURTS, L. Yu.

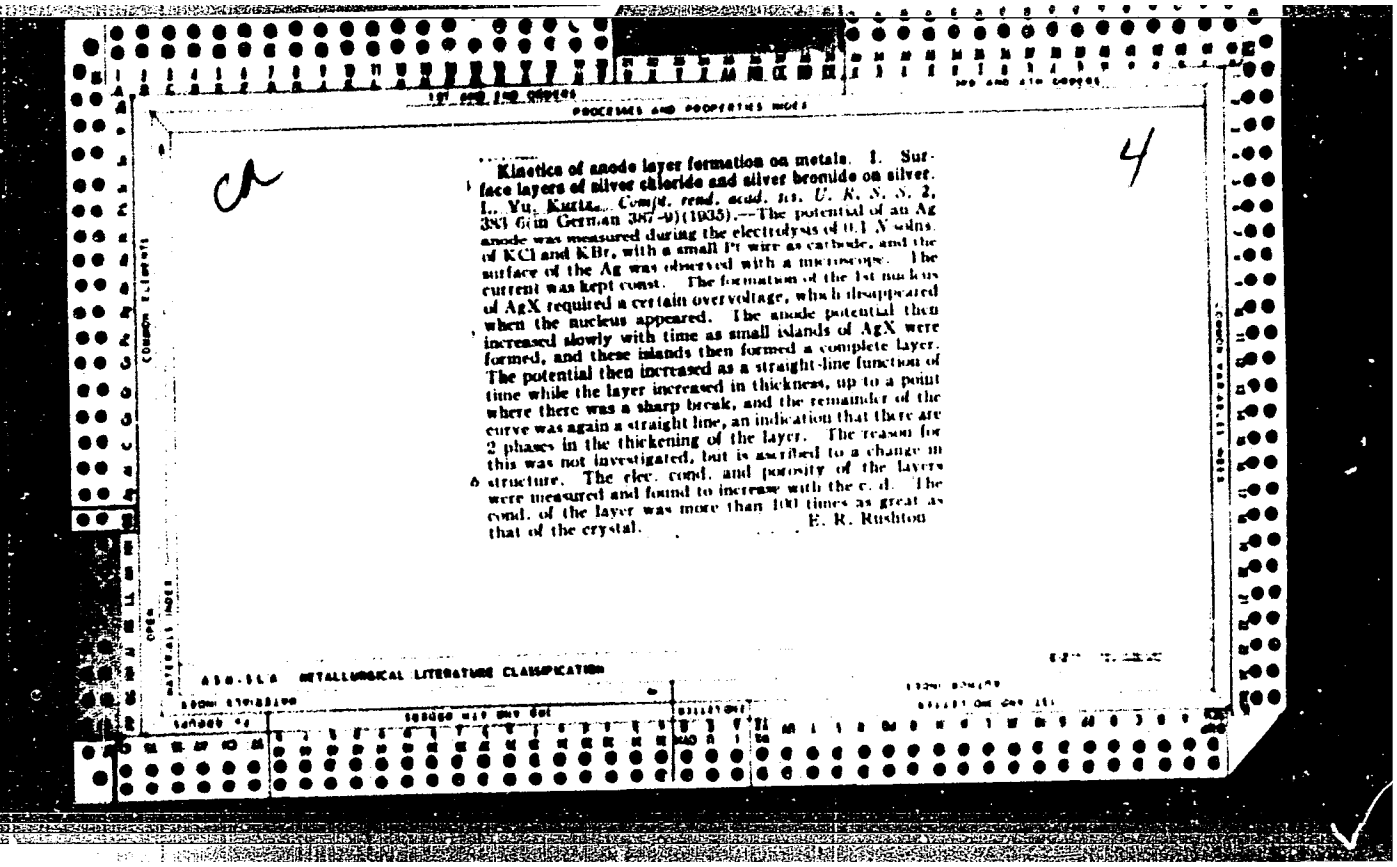
"Application of photoelectric cell for determination of degree of whiteness of bleached fiber, G. E. Mukhin, Voytzekovskiy, Kurttz, L. Yu., Ukrainskiy Khim. Zhur. , 6, Tech. Pt. 17-21 (1931)

short abstract on card of G. Ye. Mukhin



A new method of measuring the coefficient of diffusion of electrolytes. L. Yu. Kurtz and A. G. Samartzev. *J. Phys. Chem. (U. S. S. R.)* 9, 1424 8(1936). The polarization microscope together with the Lebedev interferometer was used to measure the change of concn. of the layers near the electrodes during electrolysis. The c. d. was 1.0 ma./sq. cm., the inter-electrode distance 1.1 mm. and the concn. of $ZnSO_4$ used 2 *N*. Within an accuracy of 3.0% the coeffs. of diffusion (in sq. cm. per day) of $ZnSO_4$ for the concns. (in g. equivs. per l.) are 0.27; 0.29, 1.0; 0.31, 0.5; 0.37, 0.1; and 0.50, 0.025.

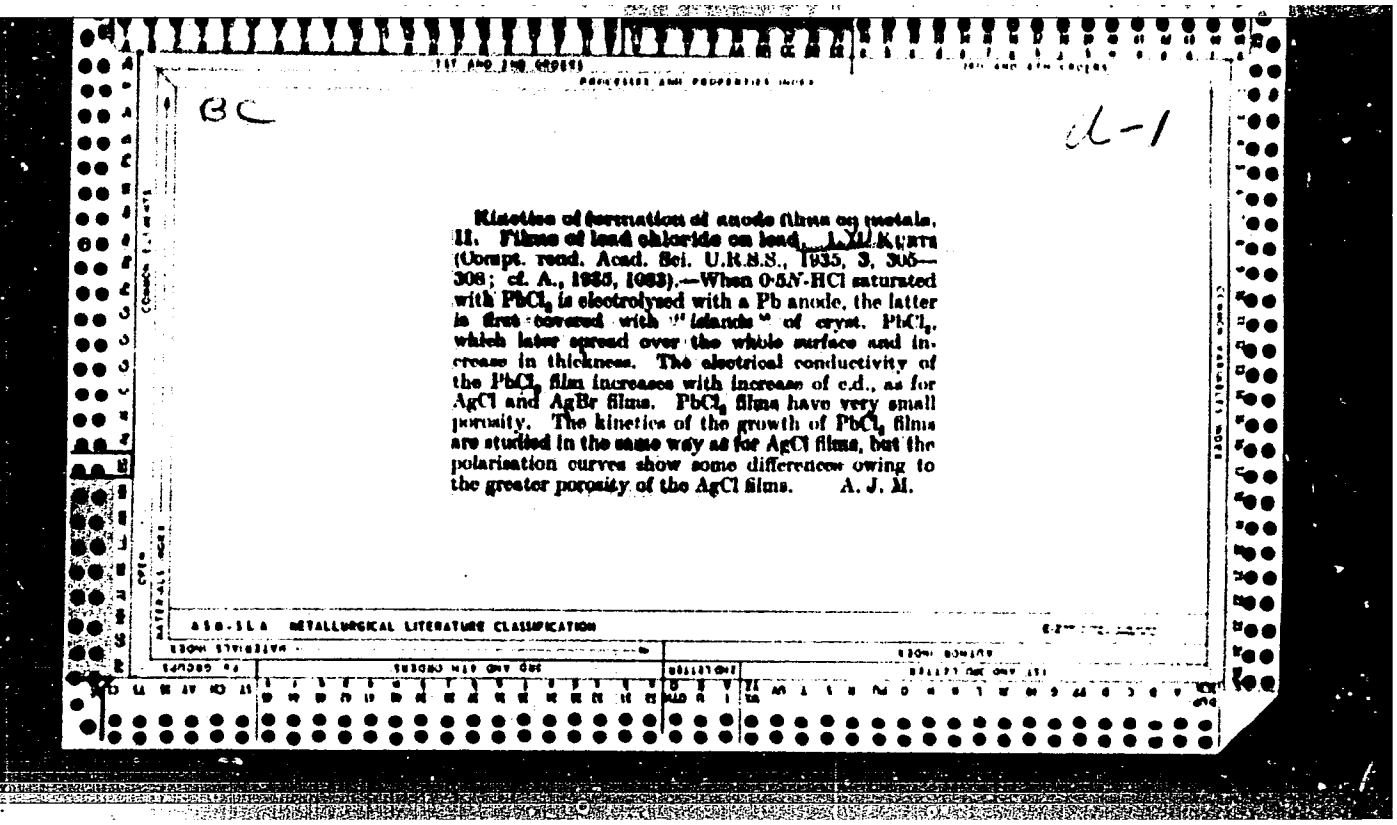
P. H. Rathmann



PROCESSES AND PROPERTIES INDEX

Kinetics of anode layer formation on metals. I. Surface layers of silver chloride and silver bromide on silver. I. Yu. Kurtia. *Compt. rend. acad. sci. U. R. S. S.* 2, 383-6 (in German 387-9)(1935).—The potential of an Ag anode was measured during the electrolysis of 0.1 *N* solns. of KCl and KBr, with a small Pt wire as cathode, and the surface of the Ag was observed with a microscope. The current was kept const. The formation of the 1st nucleus of AgX required a certain overvoltage, which disappeared when the nucleus appeared. The anode potential then increased slowly with time as small islands of AgX were formed, and these islands then formed a complete layer. The potential then increased as a straight-line function of time while the layer increased in thickness, up to a point where there was a sharp break, and the remainder of the curve was again a straight line, an indication that there are 2 phases in the thickening of the layer. The reason for this was not investigated, but is ascribed to a change in structure. The elec. cond. and porosity of the layers were measured and found to increase with the c. d. The cond. of the layer was more than 100 times as great as that of the crystal. E. R. Rushton

A50-5L6 METALLURGICAL LITERATURE CLASSIFICATION

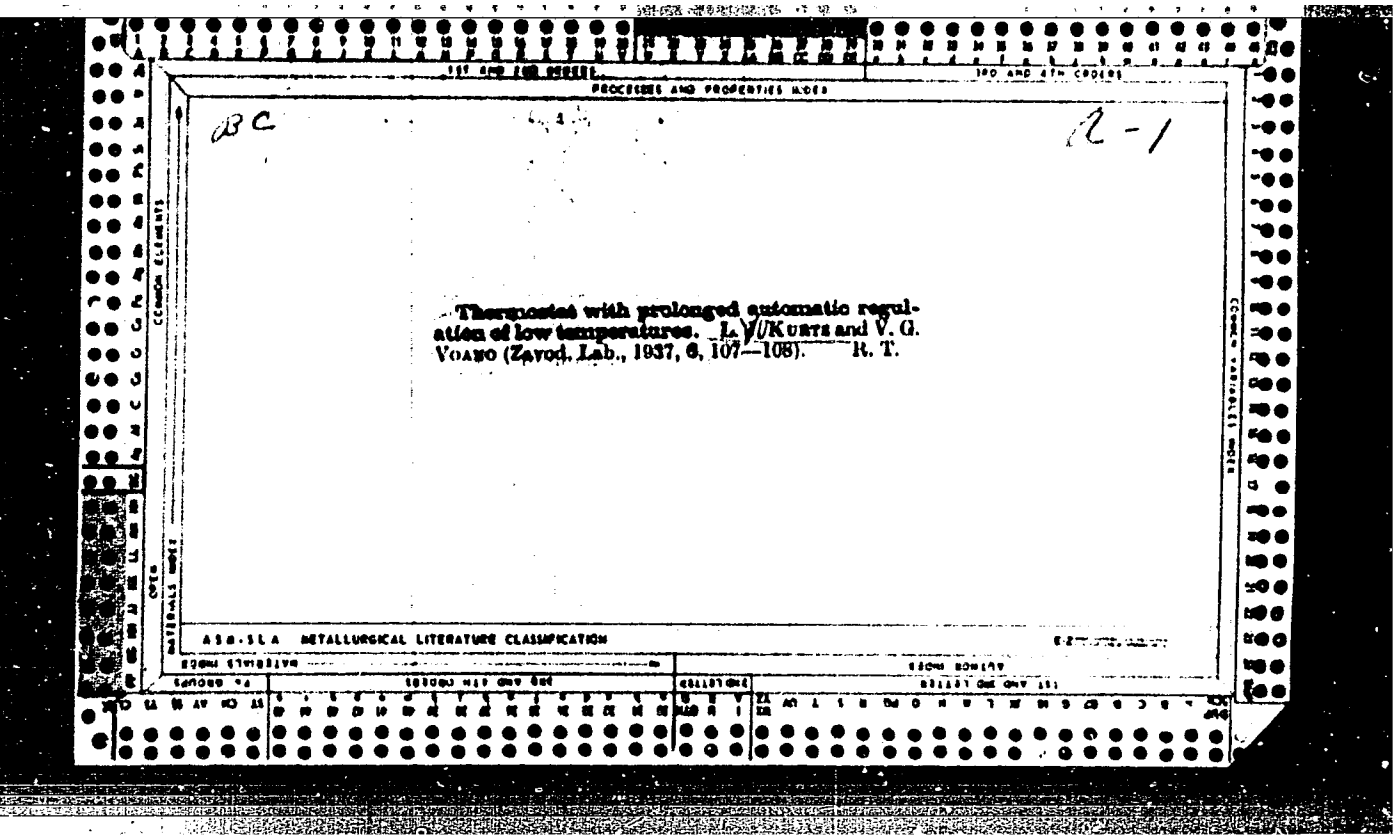


BC

d-1

Kinetics of formation of anode films on metals. II. Films of lead chloride on lead. I. YU. KLEITS (Doklady Acad. Sci. U.R.S.S., 1935, 3, 305—308; cf. A., 1935, 1083).—When 0·5*N*-HCl saturated with $PbCl_2$ is electrolysed with a Pb anode, the latter is first covered with "islands" of cryst. $PbCl_2$, which later spread over the whole surface and increase in thickness. The electrical conductivity of the $PbCl_2$ film increases with increase of c.d., as for AgCl and AgBr films. $PbCl_2$ films have very small porosity. The kinetics of the growth of $PbCl_2$ films are studied in the same way as for AgCl films, but the polarisation curves show some differences owing to the greater porosity of the AgCl films. A. J. M.

A58-SLA METALLURGICAL LITERATURE CLASSIFICATION

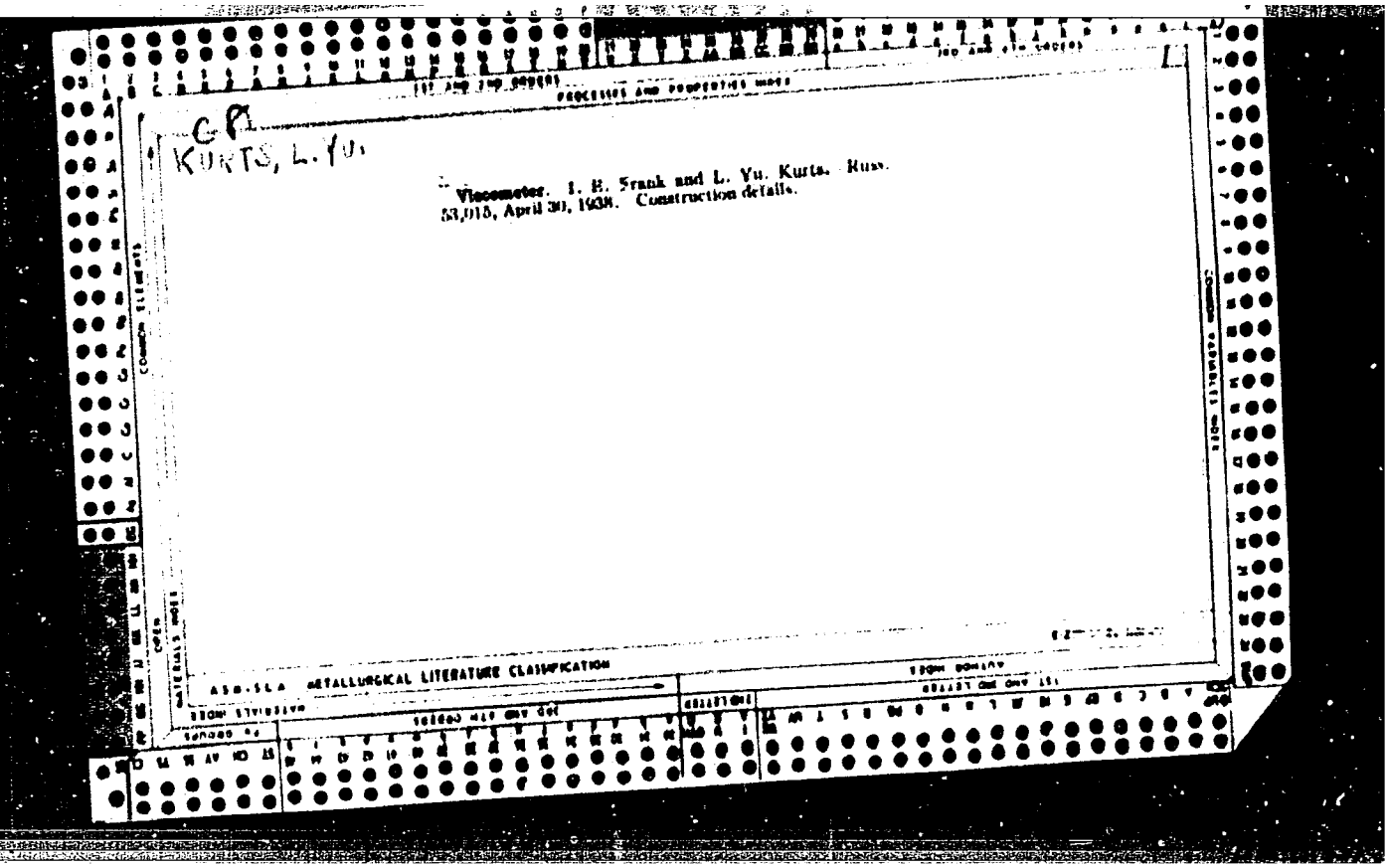


BC

R-1

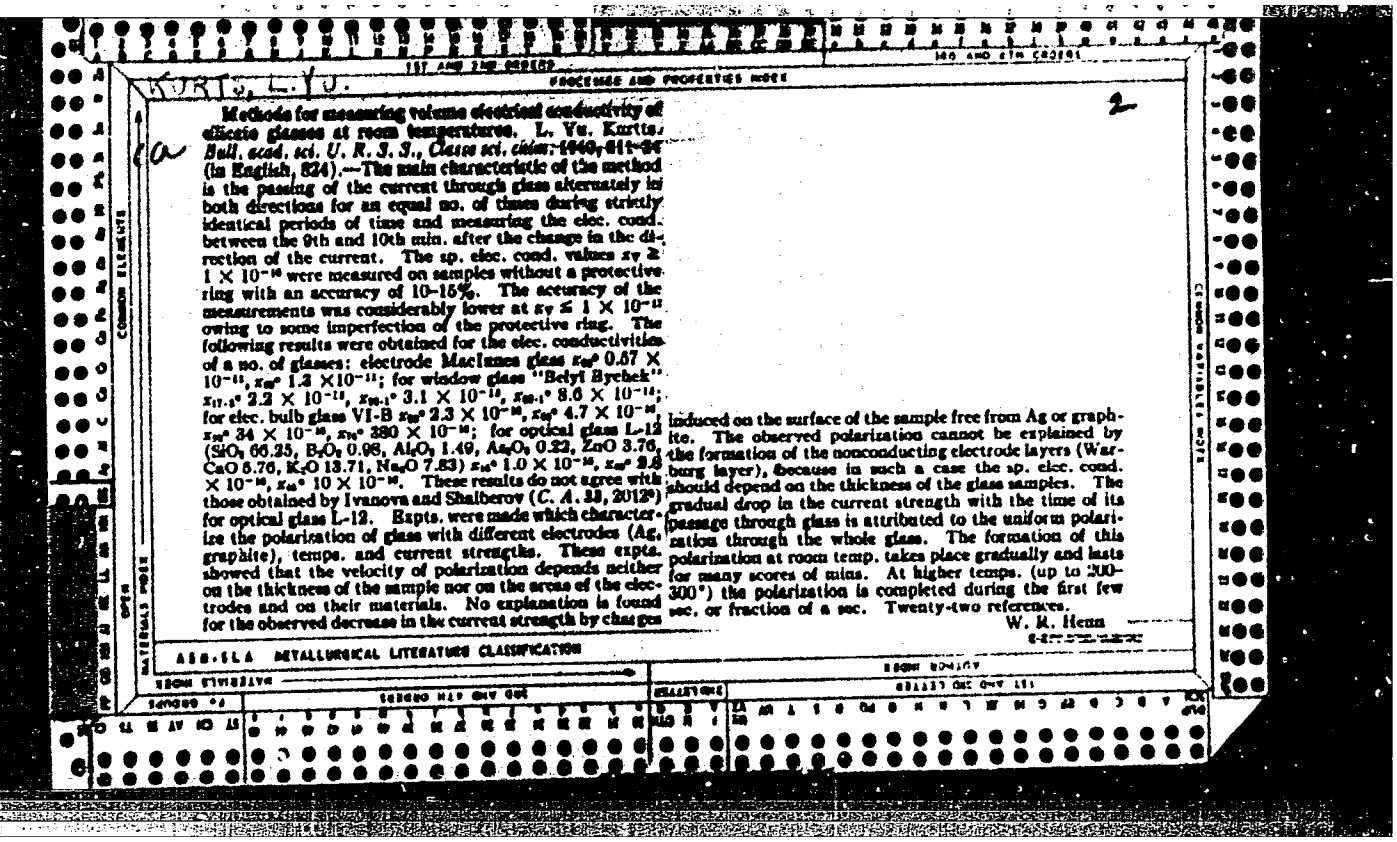
Thermostat with prolonged automatic regulation of low temperatures. L. V. Kurts and V. G. Voano (Zavod. Lab., 1937, 6, 107—108). R. T.

A 38-5 L A METALLURGICAL LITERATURE CLASSIFICATION



KURTIS, L. YU.

"The Methods of Measuring Voluminal Electroconductivity of Silicate Glasses at Room Temperatures," Iz. Ak. Nauk SSSR, Otdel. Khim. Nauk, No. 5, 1940. Acad. Sci. USSR, Inst. Gen. and Inorganic Chem., Lab Silicate Chem., -1940-.



KURTS, L. YU.

2

Methods for measuring volume electrical conductivity of silicate glasses at room temperatures. L. Yu. Kurts. *Bull. acad. sci. U. R. S. S., Classe sci. chim.* 1940, 611-24 (in English, 624).—The main characteristic of the method is the passing of the current through glass alternately in both directions for an equal no. of times during strictly identical periods of time and measuring the elec. cond. between the 9th and 10th min. after the change in the direction of the current. The sp. elec. cond. values $\kappa_V \geq 1 \times 10^{-16}$ were measured on samples without a protective ring with an accuracy of 10–15%. The accuracy of the measurements was considerably lower at $\kappa_V \leq 1 \times 10^{-17}$ owing to some imperfection of the protective ring. The following results were obtained for the elec. conductivities of a no. of glasses: electrode Maclunes glass κ_{20}° 0.57 × 10^{-11}, κ_{80}° 1.3 × 10^{-11}; for window glass "Belyi Bychek" $\kappa_{17.5}$° 2.2 × 10^{-13}, $\kappa_{99.5}$° 3.1 × 10^{-13}, $\kappa_{99.5}$° 8.6 × 10^{-14}; for elec. bulb glass VI-B κ_{20}° 2.3 × 10^{-16}, κ_{20}° 4.7 × 10^{-16}, κ_{80}° 34 × 10^{-16}, κ_{80}° 380 × 10^{-16}; for optical glass L-12 (SiO_2 66.25, B_2O_3 0.98, Al_2O_3 1.49, As_2O_3 0.22, ZnO 3.76, CaO 5.76, K_2O 13.71, Na_2O 7.83) κ_{20}° 1.0 × 10^{-16}, κ_{80}° 2.8 × 10^{-16}, κ_{80}° 10 × 10^{-16}. These results do not agree with those obtained by Ivanova and Shalberov (*C. A.* 33, 2012[9]) for optical glass L-12. Expts. were made which characterize the polarization of glass with different electrodes (Ag, graphite), temps. and current strengths. These expts. showed that the velocity of polarization depends neither on the thickness of the sample nor on the areas of the electrodes and on their materials. No explanation is found for the observed decrease in the current strength by charges induced on the surface of the sample free from Ag or graphite. The observed polarization cannot be explained by the formation of the nonconducting electrode layers (Warburg layer), because in such a case the sp. elec. cond. should depend on the thickness of the glass samples. The gradual drop in the current strength with the time of its passage through glass is attributed to the uniform polarization through the whole glass. The formation of this polarization at room temp. takes place gradually and lasts for many scores of mins. At higher temps. (up to 300–300°) the polarization is completed during the first few sec. or fraction of a sec. Twenty-two references.

W. R. Henn

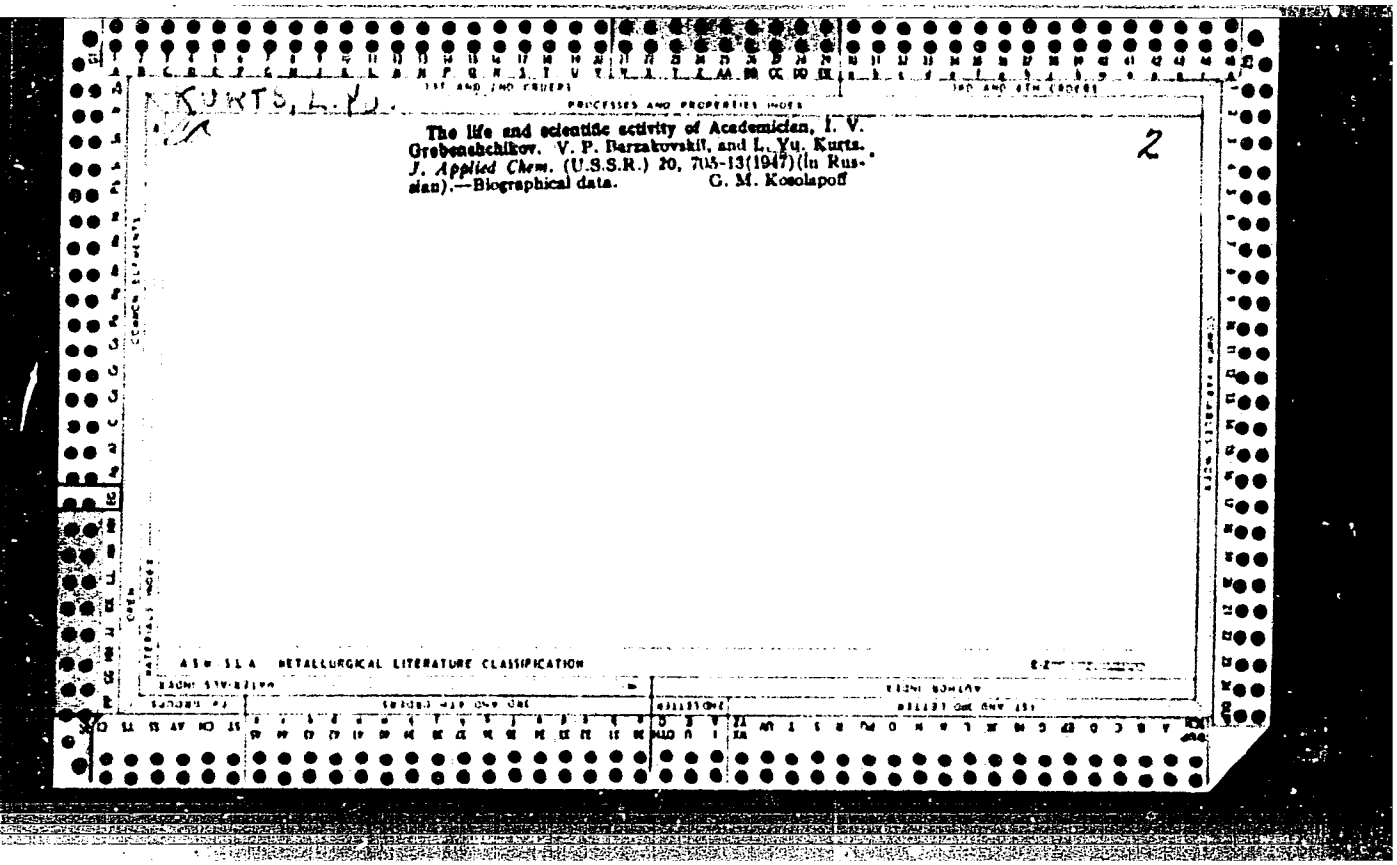
ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION

KURTS, L. Yu.
A.C.S.

Glass

"Volume and surface electrical conductivity of glasses of the system $PbSiO_3$–$Na_2Si_4O_9$. L. Yu. KURTS. *Izvest. Akad. Nauk, Otdel Khim. Nauk*, 1941, 603–607 (English summary); *Chem. Abs.*, 37, 2340 (1943).—The specific volume conductivity at 30° and 75°, the temperature coefficient of conductivity, and the polarization of the glasses are presented in curves. The diagram of composition vs. polarization shows clearly a compound, $Na_2Si_4O_9 \cdot PbSiO_3$, which is known for this system in the crystalline state. It is concluded that polarization of the glass is related more to its intramolecular structure than is conductivity itself. The specific surface conductivity of freshly broken glasses of this system was determined at various times of exposure to atmosphere of 30% humidity at 30°. The changes of surface conductivity with exposure and the absolute values depend greatly upon the composition of the glass; the results indicate the existence in the system of a compound $Na_2Si_4O_9 \cdot 2PbSiO_3$. Glasses rich in Pb, with little Na, show upon exposure of a fresh break to moist atmosphere a rapid increase of specific surface conductivity, which then begins to drop. See "Method . . .," *Ceram. Abs.*, 21 [1] 9 (1942).

Inst Gen + Inorg. Chem. Lab of Chem. of Silicates



KURTS, L. Yu.

The life and scientific activity of Academician, I. V. Grebenshchikov. V. P. Barzakovskii, and L. Yu. Kurts. *J. Applied Chem.* (U.S.S.R.) 20, 705-13(1947)(In Russian).—Biographical data. G. M. Kosolapoff

2

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

KURTS, L. YU.

KURTS, L. YU.
K. A. KRAKAU, JAN/OKhN 1949, 110-22

PHYSICOCHEMICAL PROPERTIES of TERNARY SYSTEM of SODIUM OXIDE, LEAD OXIDE AND SILICA. K.A. KRAKAU (IZDATELSTVO AKAD. NAUK SSSR, OTDEL. KHIM. NAUK, ACAD. NAUK SSSR i GOSUDARST. ORDENA LENINA OPTICHESKII INST., SBORNIK STATEI 1949 3-14.
EQUILIBRIUM DIAGRAM of system Na_2O-PbO-SiO_2. K.A. KRAKAU, E.YA. MUKHIN and M.S. GENRIKH. IBID. 15-38.

KURTS, L.Yu.

Current-conducting plastic. Med.prom. 10 no.3:43-44 Jl-S '56.
(MLRA 9:11)

1. Mediko-instrumental'noy ordena Lenina zavod "Krasnogvardeyets."
(PLASTIC MATERIALS)

Kurtts, L. Yu.

137-58-1-2034

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 276 (USSR)

AUTHORS: Il'in, V. A., Kurtts, L. Yu.

TITLE: Electrical Jet Null Method of Determining the Thickness of Coatings (Elektrostruynyy nul'-metod opredeleniya tolshchiny gal'vanopokrytiy)

PERIODICAL: Materialy po obmenu opytom i nauchn. dostizh. v med. prom-sti 1957, Nr 3 (22), pp 90-92

ABSTRACT: It is shown that the existing, widely employed intermittent-jet, volumetric-jet, and drop methods of determining the thickness h of plated coatings do not provide results of sufficient accuracy, particularly in measuring small thicknesses. A new instrument for electrical jet determination of h has been elaborated and developed. By means of this method, the end of dissolution is determined by the change in the emf of the "platinum-specimen" voltaic cell developed as the coating dissolves, at the point where the jet of solution impinges upon the specimen. At the instant that the undercoating or base metal of the part is exposed, the emf of the voltaic cell will change. Measurement of the emf is by the null method. An external emf is connected potentio-

Card 1/2

Electrical Jet Null Method of Determining the Thickness of Coatings

metrically counter-current to the emf of the voltaic cell. The potentiometer is used to attain complete compensation of the emf that had arisen and to hold the galvanometer pointer to zero. A pronounced deviation of the hand of the instrument indicates that dissolution has come to an end. It is shown that the instrument affords a significant acceleration and also an increase in the accuracy of the measurement of h of multiple coatings, with determination thereof independently for each layer.

T. M.

1. Coatings--Thickness--Determination--Methods

IL'IN, V.A.; KURTS, L.Yu.

Using the electric jet method for determining the thickness of electrodeposited coatings. Med.prom. 11 no.9:50-52 S '57. (MIRA 10:12)

1. Mediko-instrumental'nyy ordena Lenina zavod "Krasnogvardeyets"
(ELECTROPLATING)

CHERNOVA, I.N.; IONIS, M.V.; KURTS, L.Yu.

Testing various materials for protecting medical instruments from corrosion. Med.prom. 11 no.11:51-53 N '57. (MIRA:11:1)

1. Mediko-instrumental'nyy ordena Lenina Zavod "Krasnogvardeyets"
(MEDICAL INSTRUMENTS AND APPARATUS)
(CORROSION AND ANTICORROSIVES)

KAMENTSEKAYA, S.E.; KURTS, L.Yu.

Equipment for checking the centering of cystoscope lenses. Opt.-mekh. prom. 25 no. 2:40-41 F '58. (MIRA 11:7)
(Optical instruments)
(Lenses--Testing)

KURTS, M.

Disturbance of gestation, delivery and lactation in rats suffering from obesity caused by hypothalamic lesions. Nauch. dokl. vys. shkoly; biol. nauki no.1:72-77 '65.

(MIRA 18:2)

1. Rekomendovana laboratoriyey endokrinologii Moskovskogo gosudarstvennogo universiteta.

L 9766-66

ACC NR: AP6001959 . SOURCE CODE: HU/0018/65/017/001/0082/0087

AUTHOR: Kurcz, Mihaly--Kurts, M.; Kabak, J. M.--Kabak, Ya. M.

ORG: Endocrinological Laboratory, Moscow State University im. M. V. Lomonosov, Moscow (Allami Lomonoszov Egyetem Endokrinologiai Laboratoriuma)

TITLE: Prolactin content of the pituitary (I.) in cases of lesion of the eminentia mediana and the middle protion of the hypothalamus

SOURCE: Kiserletes Orvostudomany, v. 17, no. 1, 1965, 82-87

TOPIC TAGS: biochemistry, gland, experiment animal, hormone, endocrinology

ABSTRACT: In cases of simultaneous lesion of the middle portion of the hypothalamus and of the eminentia mediana, pathological obesity, caused by hyperphagia and hypopituitarism, has been observed in rats. The direct determination of the prolactin content of the pituitary indicated that prolactin production by the anterior lobe continued but the amount of prolactin was only 25 per cent of that of control animals. The possibility is suggested that the reaction of the uterine deciduoma, which is used by most of the authors as an indication of increased prolactin production, is effected not by the increase in prolactin production in the absolute sense but by the complete or almost complete lack of production of the other gonadotropic hormones. Following interruption of the connections

Card 1/2

L 9766-66

ACC NR: AP6001959

with the hypothalamus, there is only a relative increase in the prolactin secretion of the pituitary in comparison to the secretion of FSH and LH. Orig. art. has: 2 figures and 2 tables. [JPRS]

SUB CODE: 06 / SUBM DATE: 22Apr64 / OTH REF: 019

Card 2/2

KOGAN, L.M., inzh.; KURTS, M.L., inzh.

Mechanizing the coal supply and cinder removal in small and middle-size boiler rooms. Mekh.i avtom.proizv. 14 no.2: 38-40 F '60. (MIRA 13:5)
(Boilers--Technological innovations)

TROYAN, Timofey Ivanovich; KURTS, Robert Yevgen'yevich; FILOVA, L., red.

[New developments in housing construction in Moldavia] Novoe v zhilishchnom stroitel'stve Moldavii. Kishinev, Kartia moldoveniaske, 1963. 52 p. (MIRA 18:9)

136-2-5/22

AUTHOR: Okunev, A.I., Usachev, N.M., Lutokhin, D.I., Kurts, V.V., Fedotova, Ye.I. and Vostryakov, A.A.

TITLE: Results of Industrial Tests on the Smelting of Roasted Collective Copper-Zinc Concentrates. (Rezul'taty promyshlennykh ispytaniy plavki obozhzhennykh kollektivnykh medno-tsinkovykh kontsentratov)

PERIODICAL: Tsvetnyye Metally, 1957, No.2, pp. 22 - 31 (USSR)

ABSTRACT: The use of flotation for concentrating many Ural copper-zinc ores has led to the production of copper concentrates containing as much as 10-12% with copper contents of 8-10%. The aim of the present work was to test the smelting of roasts of such concentrates in a full-scale reverbatory furnace to give a zinc slag. The experimental furnace used was at the Sredneural'skiy Works and had a hearth area of about 8 m^2, chrome-magnesite walls and hearth and silica roof and was fired with coal dust. The following main results were obtained in 2.5 - 3 months' work with concentrates containing 7-9% Cu and 6 - 15% Zn to give slags with 14-15% Zn. The results of laboratory investigations on zinc distribution between slag and matte in relation to their compositions were confirmed. When mattes contained 40 - 50% Cu, the zinc content in the slag was about 1.6 - 1.8 times greater than in the matte. The

1/3

Results of Industrial Tests on the Smelting of Roasted Collective Copper-zinc Concentrates. 136-2-5/22

optimal compositions of matte (45% Cu) and slag as well as the degree of de-sulphurisation were determined. Deep roasting is one of the main requirements, even when roasting and smelting are carried out in one unit. With deep roasts 80% of the zinc goes from the solid charge into the slag, 8.9% into the matte and 8-12% into the gas. With a 45-50% Cu matte the copper content of dumped slags was 0.7%; extraction of copper into the matte depends on the copper content of the concentrate and can be 90-93% with return of dust to the smelter, and up to 96-97% with treatment of the zinc slag. Extraction of noble metals was about the same as with raw or lightly-caloried charge. Average dust production is 4.5% of the charge weight and there can be up to 20-24% zinc in it (depending on the zinc content of the charge). Optimal sulphur content of the roast is 9-10% (2.0 - 2.5% sulphate sulphur); de-sulphurisation during smelting is 48-56%. Good separation of smelting products was always obtained, but observations on the state of the hearth suggest desirable design changes. Besides tabulation of materials analysis and metals balance graphs of zinc distribution vs matte copper content, of copper content in matte and slag vs time and of product temperatures vs time are given.

2/3

136-2-5/22

Results of Industrial Tests on the Smelting of Roasted Collective Copper-zinc Concentrates.

Information on productivity, fuel rates and behaviour of refractions is included.

3/3 There are 3 figures, 5 tables and 3 references, of which 1 is Slavic.

ASSOCIATION: Unipromed'. and the Sredneural'skiy Copper Smelting Works. (Unipromed' i Sredneuralskiy Medeplavilnyy Zavod)

AVAILABLE: Library of Congress

KUCHIN, V.V.; KURTS, V.V.; TYUMENOV, A.I.; TYUMENTSEV, V.G.

Reduction of oxidized copper by the products of thermooxidative pyrolysis of natural gas in pyrorefining. Gaz. prom. 10 no.9:45-47 '65. (MIRA 18:11)